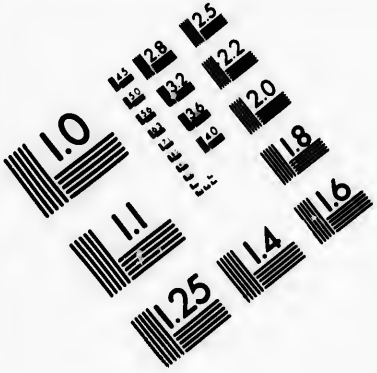


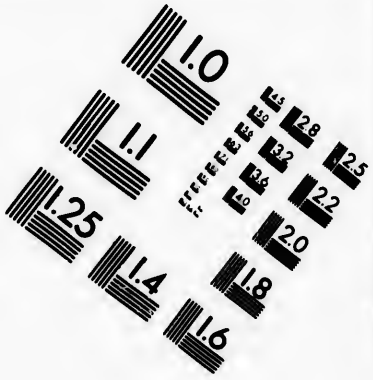
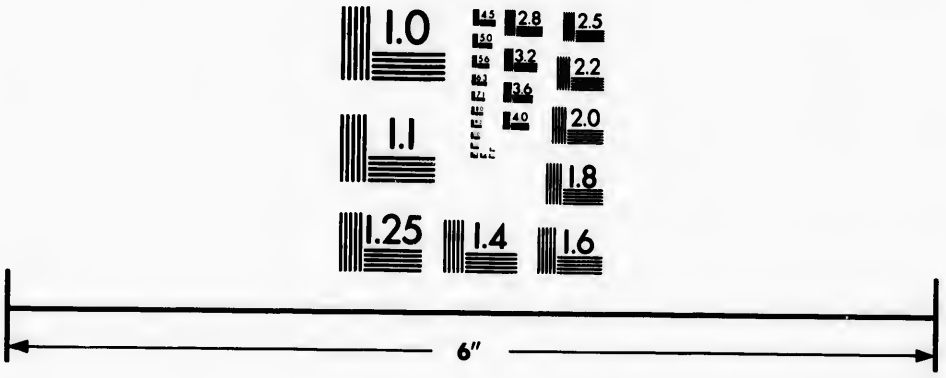
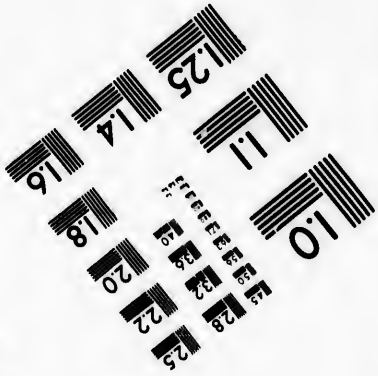


IMAGE EVALUATION TEST TARGET (MT-3)





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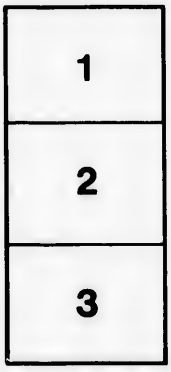

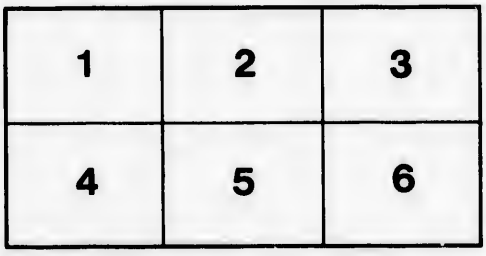

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AUTHOR

Rep. 2

REPORT

ON THE

FISHERIES OF NOVA SCOTIA.

By THOMAS F. KNIGHT,

AUTHOR OF "NOVA SCOTIA AND HER RESOURCES," (PRIZE ESSAY,) AND PAMPHLETS ON THE FISHERIES OF NOVA SCOTIA.

BY AUTHORITY.

HALIFAX, N. S.
PRINTED BY A. GRANT,
PRINTER TO THE QUEEN'S MOST EXCELLENT MAJESTY.
1867.

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CONTENTS.

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STATEMENT OF FISHING LICENSES

Issued at the Custom House, Port Mulgrave, N. S., to United States Vessels, during the year 1867.

No.	Name of Vessel.	Port.	Master.	Tons.	Rate per Ton.	Total.
1	Martha A. Brewer. .	Belfast, Maine	Wm. J. Turner ...	44	$1 00	$44 00
2	Mary Ellen	Gloucester, Mass. .	Wm. Wharf.....	54	"	54 00
3	Wild Pigeon.....	Do.	N. Thurston.....	46	"	46 00
4	Ida C. Spofford.....	Do....	G. Spofford	47	"	47 00
5	Banner.....	Belfast, Maine	D. McFarlane	46	"	46 00
6	Rushlight..... .	Gloucester, Mass. .	Jas. Cushing	57	"	57 00
7	Forest Queen.....	Do..... .	Daniel Smith.....	51	"	51 00
8	Lilly Dale	Do.....	W. Gardner.....	50	"	50 00
9	Wingarrsheck	Do.....	E. Butler	55	"	55 00
10	General Grant.....	Damariscota, Maine	Thos. Perry.....	50	"	50 00
11	William T. Merchant	Gloucester, Mass. .	Patrick Malady.	62	"	62 00
12	Montana.....	Do.....	M. M. Walsh.....	54	"	54 00
13	Isabel L. Pierce...	Wellfleet, Mass ...	D. Y. Pierce	77	"	77 00
14	Cora Morrison.....	Provincetown, do..	Chas. Higgins	71	"	71 00
15	Serena Ann.....	Gloucester, do..	Chas. S. Clark....	52	"	52 00
16	Sea Witch	Do. do..	A. Benson	49	"	49 00
17	Finback	Boston, do..	J. W. Graham....	96	"	96 00
18	F. M. Loring... ..	Cohasset, do..	Reuben Ryder....	55	"	55 00
19	Fleetwing.....	Gloucester, do..	Saml. Gilson	49	"	49 00
20	Leonard B. Snow ..	Truro, do..	Wm. Hampson ...	36	"	36 00
21	Laura M. Mangum..	Gloucester, do..	E. Stapleton.....	54	"	54 00
22	Wild Rover.....	Do do..	Chas. Lufkin . ..	67	"	67 00
23	Sea Flower	Belfast, Maine	W. A. Dickey	33	"	33 00
24	Omega	Cohasset, Mass ...	A. Joseph.....	47	"	47 00
25	General Grant.. ..	Southport, Maine..	John Orchard	70	"	70 00
26	Good Templar.....	Gloucester, Mass..	G. E. Lane	47	"	47 00
27	Northern Star.....	Do.....	Wm. Davis	52	"	52 00
28	Colonel Cook.....	Do...	Geo. Bearse.....	54	"	54 00
29	Re-union	Do.....	Thos. Hodge	66	"	66 00
30	Waterfall.....	Southport, Maine..	Henry Campbell ..	57	"	57 00
31	Frank Skillings....	Portland do...	Moses Griffin.....	46	"	46 00
32	Dashing Wave.....	Camden do...	Ezar Hall	52	"	52 00
33	Florence Reed.....	Gloucester, Mass..	H. Thompson	48	"	48 00
34	Grace Darling.....	Camden, Maine. .	L. Woodsworth ...	45	"	45 00
35	Highflyer	Gloucester, Mass..	James Turner	49	"	49 00
36	Snow Squall	Deer Isle, Maine..	E. Fifield..... .	46	"	46 00
37	Witch of the Wave.	Truro, Mass	Lewis Smith	48	"	48 00
38	Edwin A. Grozier..	Wellfleet, do.....	B. H. Newcomb .	51	"	51 00
39	Monterey.....	Rockport, do.....	D. C. Webster....	38	"	38 00

No.	Name of Vessel.	Port.	Master.	Tons.	Rate per Ton.	Total.
40	D. H. Bisbee.....	Camden, Maine...	J. L. Fernald.....	72	$1 00	$72 00
41	P. L. Whiton.....	Hingham, Mass...	A. G. Rich.....	59	"	59 00
42	Exchange.....	Do. do..	B. H. Lombard...	49	"	49 00
43	Monitor	Do. do..	John B. Rich.....	52	"	52 00
44	E. A. Lombard	Truro, do..	E. A. Lombard...	54	"	54 00
45	G. M. Hopkins	Hingham, do..	Allen W. Rich....	61	"	61 00
46	Mary A. Snow.....	Cohasset, do..	M. Antoine	36	"	36 00
47	Ocean Belle.....	Do. do..	Manuel Enos.....	50	"	50 00
48	General Grant.....	Gloucester, do..	William Coos.....	66	"	66 00
49	George Walton	Provincetown, do..	M. K. Parsons....	[illegible]	"	46 00
50	A. H. Faye.....	Do. do..	John Freeman....	51	"	51 00
51	John Nye.....	Hingham, do..	John T. Wyley ...	57	"	57 00
52	Bruce Phalus.....	Provincetown, do..	John Collins.....	61	"	61 00
53	Harriet Torrey ...	Cohasset, do..	J. W. Edwards ...	46	"	46 00
54	Island Queen	Gloucester, do...	John Collins.....	50	"	50 00
55	E. K. Dresser	Booth Bay, Maine.	Charles Reed.....	52	"	52 00
56	Eastern Light.....	Gloucester, Mass..	John R. Howard.	48	"	48 00
57	M. C. Rowe.....	Do. do..	Albert Tarr.....	62	"	62 00
58	Mary Snow.	Truro, do..	S. J. Rich	65	"	65 00
59	Millie Washburne..	Provincetown, do..	James F. Atwood..	53	"	53 00
60	Pescador	Gloucester, do..	E. J. Reid	47	"	47 00
61	Alaska	Do. do..	Aaron Riggs	51	"	51 00
62	Barbara Frietchie...	Do. do..	William Herrick..	54	"	54 00
63	Chaleydony.....	Do. do..	Gilbert Davis.....	43	"	43 09
64	William Sutton... .	Do. do.	Charles Lee.....	56	"	56 00
65	Juliet M. Filden . .	Castine, Maine . .	B. H. Sylvester...	54	"	54 00
66	Emma J. Gott	Provincetown, Mass	R. A. Rich.	52	"	52 00
67	Highland Chief .. .	Truro, do..	J. A. Freeman....	57	"	57 00
68	Golden Eagle	Provincetown, do..	J. G. Rand	49	"	49 00
69	Thomas Fitch	Norwich, Conn....	George Pettigrew .	58	"	58 00
70	Kit Carson.	Provincetown, Mass	James E. Rich....	81	"	81 00
71	W. H. Atwood	Wellfleet, do..	H. A. Gross.....	74	"	74 00
72	Etta E. Sylvester ..	Deer Isle, Maine..	Geo. R. Sylvester..	57	"	57 00
73	Allen Lewis.....	Booth Bay, do. .	F. K. Reed	53	"	53 00
74	Wenonah	Cohasset, Mass....	George Taylor....	61	"	61 00
75	Diadem	Harwich, do.....	William P. Taylor.	49	"	49 00
76	Ella L. Trefethen ..	Portland, Maine ..	Eben Brewer.....	74	"	74 00
77	Equity (boat)	Gloucester, Mass...	Thomas Kimball ..	16	"	16 00
78	David A. Osier	Do. do...	Charles W. Osier..	26	"	26 00
79	Smith Tuttle	Do. do...	N. Saunders.....	70	"	70 00
80	Christie Johnson ...	Wellfleet, do...	James Wyley.....	46	"	46 00
81	F. Corence	Gloucester, do...	G. Parsons.....	45	"	45 00
82	Veteran	Do. do...	Horace Mitchell...	51	"	51 00
83	Circassian	Belfast, Maine....	J. S. Sylvester....	52	"	52 00
84	Oak Grove	Do.....	Samuel Burgess...	44	"	44 00
85	James Jewett.....	Do..	J. M. Banks... ..	51	"	51 00
86	Mary Low	Gloucester, Mass..	M. H. Adams	47	"	47 00
87	Maria Webster	Wellfleet, do...	W. C. Newcomb ..	53	"	53 00
88	Almanza (boat)....	Frankfort, Maine..	W. P. Clark	20	"	20 00
89	Abigiail Brown ...	Gloucester, Mass..	James McNeill ...	44	"	44 00
90	John W. Brown....	Do.... .	M. Whelan	51	"	51 00

No.	Name of Vessel.	Port.	Master	Tons.	Rate per Ton.	Total.
91	A. H. Lennox	Westport, Maine	George P. Colby	62	$1 00	$62 00
92	Hannibel	Deer Isle, do	A. T. Hardy	39	"	39 00
93	Fanny	Newburyport, Mass	Francis Jauvrin	46	"	46 00
94	Paragon	Salem do	Isaac P. Morse	37	"	37 00
95	Wm. Tell (boat)	Gloucester, do	George W. Adams	24	"	24 00
96	Fanny Gilmour	Do. do	N. McKinney	65	"	65 00
97	Clara B. Warren	Do. do	James Brown	52	"	52 00
98	Sabine	Do. do	Thomas Grady	46	"	46 00
99	Anna C. Warner	Boston, do	Alfred Hall	72	"	72 00
100	E. P. Howard	Provincetown, do	Caleb L. Rich	45	"	45 00
101	Right Bower	Gloucester, do	L. Hobbs	52	"	52 00
102	Winged Arrow	Do. do	John R Hunley	53	"	53 00
103	Parola	Boston, do	F. L. Newcomb	39	"	39 00
104	A. F. Lindberg	Gloucester, do	George C. Johnson	50	"	50 00
105	Samuel Chase	Dartmouth, do	P. Gifford	36	"	36 00
106	Telegraph	Wellfleet do	John E. Kemp	67	"	67 00
107	Lucille Curtis	Gloucester, do	M. Whelan	45	"	45 00
108	Fannie L. Nye	Hingham, do	R. W. Laird	59	"	59 00
109	Tidal Wave	Do. do	S. D. Rich	40	"	40 00
110	Sunshine	Gloucester, do	George S. Rogers	56	"	56 00
111	Fish Hawk	Do. do	L. N. McLean	49	"	49 00
112	Joe Hooker	Do. do	Oliver Thomas	56	"	56 00
113	West Point	Do. do	S. Jeffery	46	"	46 00
114	Ceylon	North Haven, Me	W. V. Beverage	61	"	61 00
115	M. L. Wetherell	Gloucester, Mass	N McKinney	53	"	53 00
116	Mary S. Hurd	Chatham, do	J. F. Wixom	53	"	53 00
117	Saura A. Dodd	Gloucester, do	Harvey Knowlton	90	"	90 00
118	Oliver Cromwell	Nantucket, do	B. M. Tripp	47	"	47 00
119	Cadet	Gloucester, do	George H. Clarke	42	"	42 00
120	Lightfoot	Do. do	Charles H. Nute	53	"	53 00
121	R. E. Atwood	Narwich, do	Abisha Doane	74	"	74 00
122	Alice P. Higgins	Wellfleet, do	N. P. Higgins	61	"	61 00
123	B. D. Prince	Do. do	E. R. Atwood	49	"	49 00
124	Indus (boat)	Provincetown, do	Z. Rich	25	"	25 00
125	Sea Spray	Newburyport, do	E. Evans	50	"	50 00
126	Ocean Gem	Gloucester, do	J. Daniels	47	"	47 00
127	Arizona	Do. do	William Laurence	62	"	62 00
128	Lottie F. Babson	Do. do	William Greenleaf	53	"	53 00
129	Isaac Walton	Do. do	R. D. Terry	46	"	46 00
130	Morning Star	Castine, Maine	James W. Eaton	44	"	44 00
131	C. C. Dame	Gloucester, Mass	H. R. Smith	51	"	51 00
132	E. W. Merchant	Do.	Wm. R. Gould	46	"	46 00
133	Bay State	Do.	William Walsh	48	"	48 00
134	Lancet	Do.	William Thomas	46	"	46 00
135	May Queen	Do.	George E. Forest	39	"	39 00
136	Franklin Pierce	Do.	M. Stevens	48	"	48 00
137	Commodore Foote	Do.	William Dempsey	53	"	53 00
138	Eben Dale	Do.	James S. Bell	49	"	49 00
139	Morning Star	Do.	Joseph Martin	46	"	46 00
140	Farragut	Do.	John Power	42	"	42 00
141	W. R. Page	Eastport, Maine	W. Mulloch	65	"	65 00

No.	Name of Vessel.	Port.	Master.	Tons.	Rate per Ton.	Total.
142	Charles W. Brown..	Gloucester, Mass..	B. G. Cook	51	$1 00	$51 00
143	Arcola	Do.....	B. T. Torrey....	40	"	40 00
144	C. V. Minot.....	Westport, Maine ..	A. L. Colby.....	45	"	45 00
145	George Peabody ...	Gloucester, Mass..	R. Pinkham.....	58	"	58 00
146	Alice M. Gould....	Booth Bay, Maine.	John Gould	51	"	51 00
147	Telegraph.....	Do. do..	Isaac Hutchins....	51	"	51 00
148	Charger	Gloucester, Mass..	Wm. H. Thurston.	51	"	51 00
149	Centre Point.....	Do.....	Timothy Osier....	52	"	52 00
150	G. G. Kidder.....	Do.....	George M. Reid ..	56	"	56 00
151	Andrew Johnson ...	Do.....	William McLellan.	57	"	57 00
152	William H. Thurston	Do.....	James Thorburn...	48	"	48 00
153	Volunteer.	Do.....	J. B. Smith.... ..	52	"	52 00
154	Isaac Somes.....	Do.....	A. C. Adams.....	58	"	58 00
155	Laura T. Chester...	Truro, Mass.....	E. Cobb...	61	"	61 00
156	Vision.....	Hingham, Mass...	R. D. Cobb	43	"	43 00
157	Flying Mist.....	Gloucester, do....	S. Nickerson	52	"	52 00
158	Eastern Clipper....	Westport, Maine ..	William D. Barter.	40	"	40 00
159	Archer.....	Southport, do....	George W. Pierce.	51	"	51 00
160	Ocean Lodge.....	Gloucester, Mass..	Alexander Smith..	44	"	44 00
161	Weatherguage....	Do.....	A. C. Thomas.....	56	"	56 00
162	Ann Maria.....	Do.....	J. J. Coffin.....	42	"	42 00
163	H. B. Stanwood....	Do.....	A. J. Hammond...	50	"	50 00
164	Fashion.....	Do.....	John Peterson....	46	"	46 00
165	Abby Morse..... .	Vinal Haven, Me..	E. J. Hopkins....	27	"	27 00
166	Prima Donna.....	Southport, do...	A. E. Small.....	48	"	48 00
167	Chaparral.....	St. George, do...	T. H. Teel.	41	"	41 00
168	Eliza Jane.....	Gloucester, Mass..	H. M. Collins....	39	"	39 00
169	H. A. Johnson.....	Do.....	Alonzo Holbrook..	52	"	52 00
170	Riversdale	Do.....	John Scott.....	52	"	52 00
171	Ellen Frances	Do.....	Laurence Meney..	46	"	46 00
172	Traverse.....	Swan's Island, Me.	Freeman Gott....	42	"	42 00
173	David Brown, junr..	North Haven, do..	F. Thomas.....	58	"	58 00
174	Eldorado	Gloucester, Mass..	Robert McLean...	42	"	42 00
175	Sarah E. Nightingale	Eastport, Maine...	G. W. Hilyard....	45	"	45 00
176	Robert Emmet.....	Gloucester, Mass..	Hugh Foley	45	"	45 00
177	Empire State.....	Do.....	Stephen Smith....	52	"	52 00
178	T. L. Mayo	Do.....	J. F. Critchet	50	"	50 00
179	Mary Lizzie.....	Westport, Maine ..	C. B. Jewett	32	"	32 00
180	Sarah E. Babson...	Portsmouth, N.H..	E. Tarlton.... ..	44	"	44 00
181	Amos Cutter.....	Gloucester, Mass..	A. F. York	56	"	56 00
182	Frederick L. Webb.	Booth Bay, Maine.	Daniel Greenleaf..	45	"	45 00
183	Martha A. Porter ..	Gloucester, Mass..	D. Ingersoll.	51	"	51 00
184	Express	Do.....	Richard Murphy..	50	"	50 00
185	Good Templar... .	Portland, Maine ..	T. D. Woodbury..	46	"	46 00
186	Energy.....	Gloucester, Mass..	James Brown.....	51	"	51 00
187	Roger Williams....	Do.....	S. W. Smith	53	"	53 00
188	John Wesley	Rockport, Mass...	C. C. Poole	46	"	46 00
189	Mary B. Dyer.....	Wellfleet, do....	W. O. Purvere ...	92	"	92 00
190	Samuel E. Sawyer..	Gloucester, do....	A. T. Webber	61	"	61 00
191	Twilight.	Bristol, Maine	Thos. McFarlane..	52	"	52 00
192	Margaret	Gloucester, Mass..	P. Fanning	43	"	43 00

No.	Name of Vessel.	Port.	Master.	Tons.	Rate per Ton.	Total.
193	Mountain Laurel...	Bristol, Maine	B. McFarlane	50	$1 00	$50 00
194	Dacotah	Gloucester, Mass..	Henry Williams...	51	"	51 00
195	Thomas Hunt	Do.....	James Tobin	61	"	61 00
196	Golden Eagle	Deer Isle, Maine..	A. Sweetzer.. ..	44	"	44 00
197	H. Atwood.....	Wellfleet, Mass ...	S. Foster	61	"	61 00
198	Highland Lass.....	Deer Isle, Maine..	James W. Jordan .	50	"	50 00
199	Old Chad.....	Booth Bay, do....	L. McClintock....	48	"	48 00
200	Annie Harris.....	Bremen, do.. .	E. C. Harris.....	52	"	52 00
201	S. A. Parkhurst....	Gloucester, Mass..	A. Sh verce.....	51	"	51 00
202	Fannie R.....	Do.....	Mark Sweeney ...	53	"	53 00
203	Shooting Star.....	North Haven, Me .	E. Alexander.....	47	"	47 00
204	James S. Ayer.....	Gloucester, Mass..	Samuel Rines	56	"	56 00
205	Lizzie Williams....	Camden, Maine...	E. C. Cooper.	51	"	51 00
206	J. J. Burns.....	Gloucester, Mass..	John McDonald...	53	"	53 00
207	Wm. H. Raymond..	Do.....	H. Hutchins.....	70	"	70 00
208	Fitz E. Riggs	Do.....	Nicholas Murphy..	49	"	49 00
209	Flora Temple	Do	John E. Saunders..	50	"	50 00
210	Ada A. Frye.....	North Haven, Me..	Robert Cooper...	52	"	52 00
211	Rena	Bristol, do..	W. H. McRae....	49	"	49 00
212	George F. Keen ...	Bremen, do..	Abden Keen	63	"	63 00
213	J. B. Woodbury....	Portland, do..	John B. Woodbury	49	"	49 00
214	City Point	Do	John Fisher.....	53	"	53 00
215	John Pew.....	Swan's Island, do..	E. M. Staples	40	"	40 00
216	Daniel Webster....	Gloucester, Mass..	George Sherman..	52	"	52 00
217	Golden Rule	Swan's Island, Me.	B. J. Staples	42	"	42 00
218	Flying Fish.....	Gloucester, Mass..	John E. Thompson	57	"	57 00
219	Annie Freeman....	Booth Bay, Me....	M. Reid...	65	"	65 00
220	James G. Tarr.....	Gloucester, Mass..	R. J. Reeves	70	"	70 00
221	Lizzie F. Choate...	Do.....	J. W. Collins.....	71	"	71 00
222	A. M. Nash.....	Booth Bay, Me....	C. C. Thompson ..	61	"	61 00
223	Mary E. Rich	Provincetown, Mass	F. W. Cobb.	68	"	68 00
224	Look Out.....	Portland, Me.....	Milton Libbey. ..	48	"	48 00
225	Hattie S. Clark .. .	Gloucester, Mass..	Paul Hiltz.....	59	"	59 00
226	King Fisher.....	Southport, Me	J. P. Hodgdon....	46	"	46 00
227	Queen of the Fleet.	Do	M. T. Brewer.....	59	"	59 00
228	Alfarata	Gloucester, Mass ..	Samuel T. Rowe..	45	"	45 00
229	Willie G.....	Southport, Me.....	S. L. Hodgdon ...	49	"	49 00
230	Jennie Armstrong ..	Westport, Me....	B. F. Jewett	54	"	54 00
231	Leonard McKenzie.	Gloucester, Mass..	Samuel Merchant..	55	"	55 00
232	A. C. Woodbury ...	Do	Geo. W. Whelan..	62	"	62 00
233	Ringleader.....	Provincetown, do..	Joseph Pinckney.	46	"	46 00
234	B. F. Rich.....	Do	John B. Bangs ...	59	"	59 00
235	Charles P. Barrett..	Gloucester, do..	J. Blatchford.....	35	"	35 00
236	Samuel Wonson....	Gloucester, Mass..	Joseph M. Bearse .	45	"	45 00
237	Colonel Ellsworth ..	Do.....	George Robinson..	63	"	63 00
238	William Babson....	Do.....	John S. Jamieson..	46	"	46 00
239	Julia Parsons.....	Do.....	Daniel Douglas...	71	"	71 00
240	Montezuma	Beverley, Mass...	Daniel W. Lowe..	54	"	54 00
241	Highland Queen ...	Woolwich, Maine..	G. B. Dunton	48	"	48 00
242	Colorado.....	Gloucester, Mass..	Wm. J. Rogers ...	53	"	53 00
243	Fred Dunbar.....	Castine, Maine....	Joseph Dunbar ...	61	"	61 00

No.	Name of Vessel.	Port.	Master.	Tons.	Rate per Ton.	Total.
244	J. H. Nickerson....	Gloucester, Mass..	J. H. Nickerson...	56	$1 00	$56
245	John Quincy Adams	Do.....	Thomas Watson...	50	"	50
246	Delia Maria.....	Do.....	William Leary....	46	"	46
247	Live Yankee.....	Do.....	Peter Thompson ..	46	"	46
248	Laura Sayward....	Do.....	S. H. Williams ...	58	"	58
249	George S. Low.....	Do.....	Z. Tarr.....	52	"	52
250	General Scott	Provincetown, Mass	S. N. Hughes. ...	55	"	55
251	Lida and Lizzie....	Portland, Me.....	John Frellick.....	47	"	47
252	Camilla	Provincetown, Mass	John B. Cooper...	44	"	44
253	Sophronia.....	Gloucester, Mass .	William Fanton...	52	"	52
254	Henry Ellsworth...	Do.....	Peter Delf.....	53	"	53
255	Massena.....	Do.....	George H. Davis..	51	"	51
256	Marshal Ney.... .	Provincetown, Mass	E. W. Lombard...	39	"	39
257	Sarah E. Snow.....	Gloucester, Mass..	W. Osier	48	"	48
258	R. C. Parsons	Do.....	Patrick Boak.....	42	"	42
259	C. C. Pettingill	Do.....	Robert Allen.....	46	"	46
260	William J. Dale....	Do.....	David A. Osier ...	55	"	55
						13432

Total amount collected to date: Thirteen thousand, four hundred and thirty-two dollars.

VINCENT J. WALLACE,
Collector.

Custom Office, Port Mulgrave, N. S.,
10th Oct., 1867.

Account of Fees received for Fishing Licenses, issued at the Port of Halifax to subjects of the United States.

No. of License.	Date.	Vessels Name.	Master's Name.	Where Owned.	Number of Tons.	Number of Men.	Fee per Ton.	Amount.
1	1867 June 6....	Ruth Groves	David D. Gaffney.. ...	Gloucester, Mass...	68	16	$1.00	$68 00
2	" 19....	Effort.....	Charles Loveland	New London, Conn.....	9	3	.....	9 00
3	" 26.....	Samuel Gilbert	Richard Hanan	Gloucester, Mass..... ..	51	15	.....	51 00
4	July 25....	William A. Pew	John Hiltz.....	Gloucester, Mass.....	70	15	.....	70 00
5	" 31.....	Eliza R. Parker	Edward Treyoy.....	Gloucester, Mass.....	57	15	.....	57 00

CUSTOM HOUSE,
Halifax, N. S., November 5th, 1867.

E. BINNEY, *Collector.*

Statement of Fishing Licenses issued to United States Vessels at Port Hood during the year 1867.

Name of Vessel.	Owners.	Port.	Tons.	Rate per Ton.	Total.
Franklyn Snow.....	Joseph Smith	Gloucester, Mass..	66	$1.00	$66 00
Day Star.....	Michael Daniel ...	Booth Bay.....	40	.....	40 00
J. G. Craig	J. G. Craig	Portland.	77	.....	77 00
Flying Cloud... ...	William Gammon .	Gloucester, Mass..	59	.....	59 00
			242		242 00

Port Hood, October 2, 1867.

EDWD. D. TREMAIN, Issuer.

The officers authorized to issue Licenses at the Ports of Yarmouth and North Sydney report that they have issued no Licenses in 1867. No reports have been received from the officers at Pictou and Plaister Cove.

T. F. KNIGHT.

Halifax, 5th November, 1867.

Port Hood

te per ton.	Total.
.00	$66 00
....	40 00
....	77 00
....	59 00
	242 00

N, Issuer.

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NIGHT.

REPORT.

To the Hon. PETER MITCHELL,
Minister of Marine and Fisheries
Of the Dominion of Canada.

SIR,—In undertaking to report to you upon the Fisheries of Nova Scotia, it must be evident that little more is required from me, than to go over the ground taken up by my two pamphlets on this subject, so recently published, entitled "The Shore and Deep Sea Fisheries," and "The River Fisheries," both of which contain the most recent information. Those pamphlets are full of detail, and comprehensive in the topics they embrace. I shall now endeavor to present, in a narrower compass, the main facts which those pamphlets contain, giving most prominence to those points, the discussion of which may further the work of legislation for the Fisheries, to which you purpose to invite the attention of Parliament.

The Fisheries of Nova Scotia are of immense moment to this section of the Dominion. Being a peninsula, it lies open to the ocean nearly throughout its whole coast; and it is in immediate proximity to the richest fishing grounds of North America. Its rivers are numerous; most of them of considerable size; and are admirably adapted to be the home of the salmon and other fish which frequent the northern rivers of this continent.

The Legislature of Nova Scotia has at different times instituted inquiry into the condition of its Sea Fisheries. In the Journal of 1837 (Appendix No. 75) will be found an able report of a committee appointed to consider the condition and prospects of the fisheries, founded on interrogatories submitted to the most intelligent commercial men engaged in the fisheries throughout the Province; and in subsequent Journals of almost every year, down to 1854. the subject of the fisheries has a prominent place in the form of Reports of Committees, or correspondence with the British Government, or Reports of the commanders of cruisers employed in the protection of the fisheries. Since 1854, in which year was concluded the Reciprocity Treaty with the United States, the subject of the fisheries has occupied but little scrutiny from either the Legislature or the community generally. The improved markets which the treaty created for our export of fish to the United States, rendered them in the whole prosperous; and if defects existed in the preparation of fish for export, they were not perceived, or if perceived were not considered of any great importance. Since the repeal of the treaty, we have suffered great disadvantage in the United States markets, owing to the return to a scale of high duties; but in whatever degree this reverse may have been disastrous to individuals engaged in particular fisheries, the total exports are but little affected by it.

The River Fisheries have also enjoyed a share of the notice ofthe Legislature. So rapid was the decline of the river fisheries of Nova Scotia that the Legislature passed an act in the session of 1853 to arrest their destruction by stringent laws. This act contained more rigorous penalties;

established the system of close time; and included the appointment of Wardens in every County to see that the provisions of this act were carried out; to appoint deputies, and to institute a general oversight of the fisheries. Such a deplorable condition of the valuable rivers of Nova Scotia which had a few years before teemed with the choicest fish, does the documents furnished to the Government in this year reveal, that no language can adequately describe it. The examination of every important river and stream in the Province by the wardens and their deputies, and the enforcement of the law, even partially, could not fail to initiate a new era in the history of our river fisheries. A gentleman whose name has long been associated with our Inland Fisheries, was at this time appointed Supervisor for the County of Halifax. His suggestions to the Government were considered to be of great practical importance, and he was subsequently employed in several visits of inspection of the river fisheries throughout different sections of the Province. We owe to the enthusiastic labor, in no small degree, of Captain William Chearnley that our valuable river fishes have not ere this been utterly exterminated. The committee of the Legislature to whom were referred the reports of the Fishery Wardens, report to the house in the following year: "We are inclined to believe that this subject has hitherto occupied too small a share of public attention; that its importance has been undervalued, and that the policy of the Legislature in the laws it has passed on the subject, has been little understood or appreciated." This committee manifested so deep an interest in the subject before them, that they gathered from authentic sources much valuable information concerning the habits of the salmon and the manner of artificial propagation, and the answers to questions submitted to experienced persons, all of which was embodied in a pamphlet and published by the Government. The solicitude which the Legislature had evinced during three successive years, seems now to have abated, since in the short space of two years the whole legislation respecting these fisheries and their supervision, seems to have been referred to the County Sessions.

The Sea Fisheries rank first in importance; and to these I will address myself first in order.

I. SHORE AND DEEP SEA FISHERIES.

Nova Scotia ranks first among the Provinces of the Dominion in her Sea Fisheries. While New Brunswick exports in products of the sea to the amount of over $300,000, and Canada to the amount of $800,000, Nova Scotia has exported every year, with little variation, for the last twelve years, to the amount of $3,000,000.

These Fisheries are prosecuted along the coast-line of Nova Scotia, on the nearest banks, and in the Gulf of Saint Lawrence. Along the coast-line of Nova Scotia, from St. Mary's Bay to the Bay of Fundy, eastward to Cape Canseau, and for a considerable distance along the Cape Breton coast, there is a bank or ledge, from five fathoms, or less, to fifty fathoms soundings, and which extends into the ocean at a distance varying from five miles to twenty miles, or more. This ledge is the feeding-ground of the cod; and the herring and mackerel herd in its waters. This bed or plateau, in its length and breadth, embraces within its limits our valuable shore fishery. Besides this fishing ground, there are the numerous fishing banks which exist further out into the ocean, the size and form of each being distinguished by the marked difference in the soundings from those of the surrounding water. The

soundings vary ; in some banks from five fathoms to sixty fathoms, in others from twenty to fifty, and in others from forty to sixty. The most westwardly bank to which our fishermen repair is St. George's Bank. This bank lies about eighty miles southwest of Cape Sable, and being of large extent, is a favorite resort of the fishermen from the United States. Next we have LaHave Bank, situated about sixty miles from the harbour of Shelburne, which is some sixty miles in length. There is a smaller bank, called Roseway Bank, about midway between LaHave Bank and the shore. Sable Island Bank extends south and west from Sable Island, extending westward nearly one hundred miles. Sambro Bank, about fifty miles from Sambro Light-house, is a small bank of only ten miles long ; it is constantly resorted to by fishermen from Sambro and its vicinity. Next we have Canseau Bank, thirty miles in length, situate about twenty miles from Cape Canso. The last of these treasuries of the deep that deserve notice is the Bank Quereau, seventy miles south-east of Cape Canso, the north-east point of which approaches nigh to Bank St. Pierre. This fertile bank is one hundred and forty miles long, and its widest part is one hundred and ten miles. Its northern extremity is called Mizen Bank.

Our "Bankers" range from thirty to one hundred tons, and average eight men each. They go to sea from 1st April to 1st May, and continue cod-fishing on the various banks until about the 10th June. These "Bankers" sometimes take halibut in large quantities, mostly on Sable Island Bank and LaHave Bank ; but these fish are decreasing in numbers. In June or July they proceed to the coast of Cape Breton, and thence to Gulf of St. Lawrence. The cod they take on the banks are fine, thick, well-fed fish, but being cured in bulk are inferior to the carefully-cured fish which are taken near the shore, and dried on flakes soon after they are caught. Three hundred to four hundred pounds of fish is considered a good day's work for one man.

The shore or boat-fishery is carried on to a greater or less extent along our whole coast. The herring and the mackerel, in large numbers, frequent the whole Atlantic coast ; and the salmon are intercepted by nets in the bays, and near the islands and points of lands, while returning to the rivers. For the cod and haddock fishery, whale-boats, manned by two to four men, and sail-boats, undecked, are used ; fishermen commence about the 20th May, and fish within five to fifteen miles of the land. Prosecuted within their proper seasons, the cod, herring, mackerel, and salmon fisheries constitute a most valuable portion of our Provincial industry. Our fishermen are an athletic, hardy, and industrious class of our population ; they respect the laws, and are patient under the vicissitudes of their hazardous and precarious calling.

Besides the shore and bank fisheries, so profitably prosecuted by the fishermen of Nova Scotia, which have been described in the foregoing pages, there has ever been a much larger field of enterprize open to them, in common with the whole people of the British Provinces. Nova Scotian fishermen every year visit, in their vessels, the coast of Newfoundland, the Labrador, and all the important places in the Gulf of St. Lawrence. They have carried their enterprize within the boundaries of Canada, periodically frequenting the Bay of Chaleur, and the coast of Gaspé, and have revealed to the Canadian people how valuable a source of wealth they possess at their doors. Pierre Fortin, Esq., who for many years has been employed by the Canadian Government as Magistrate commanding the Expedition for the Protection of the Fisheries in the Gulf of St. Lawrence, frequently, in his "Reports," eulogises the enterprise of the fishermen of Nova Scotia on the coast of Gaspé, and generally in the

Gulf of Saint Lawrence. "Every year," he writes, "the coasts of Canada are visited by from 250 to 350 fishing schooners from Nova Scotia, and by from 200 to 300 fishing schooners from the United States, from the spring to the autumn, in well equipped vessels, busily employed taking our finest fish; and we find them afterwards, with those very fish, competing with us in foreign markets, and almost always successfully."

Although, in treating of the sea-fisheries, the Bay of Fundy presents less interest to us than either the Atlantic coast or the Gulf of Saint Lawrence, neither the cod or the herring being found in very great abundance at the Bay, and the mackerel, except at the entrance of the Bay, almost unknown, its fisheries in the aggregate engage a large proportion of the industry of the inhabitants residing near the shores.

Off Apple River some good cod are caught in seines, and herrings, very fine and fat, are taken in July with a mesh of 2½ inches; halibut, of exceedingly large size, are taken not far from the Light-house, during the summer. At the large rocks, called the Sisters, about three miles below Apple River, there is very good fishing for cod during the summer. From the Sisters to Cape Chignecto there is not much fishing, the coast being lofty, without shelter, and greatly exposed to southerly or westerly gales. Between Isle Haut and Cape Chignecto there is a bank extending almost entirely across that channel, upon which there is good fishing the greater part of every summer, and likewise along the north shore of the Basin of Minas.

On the south shore of the Bay, extending from Black Rock to Brier Island, there are three fishing banks or ledges, lying parallel to the shore, outside each other; their respective distances from the coast have acquired for them the designations of the three mile ledge, the five mile ledge, and the nine mile ledge. On these ledges there are 60 fathoms of water, but on the crown of each ledge 30 fathoms only. The 3 mile ledge and the 5 mile ledge extend quite down to Brier Island; but the 9 mile ledge can only be traced down the Bay, about 14 miles below Digby Gut, abreast of Trout Cove, where it ends in deep water. Below Digby Gut, the 3 mile ledge and 5 mile ledge are composed of hard gravel and red clay; above the Gut, the 3 mile ledge has a rough, rocky bottom, on which anchors are frequently lost. Each of these ledges is about a mile in width, the outer one something more; between them the bottom is soft mud.

In April, the small rock cod strike in on the south shore, which they follow up to Cape Split, whence they cross to the New Brunswick side of the Bay. This is the opinion of the American fishermen, who follow them at that season, fishing close in shore; and with them they take many halibut of large size. On the ledges, the best fishing is in June and July; but the fishing continues until the end of September. The cod taken on the ledges, in June and July, are well-fed fish, 30 of which, on the average, will make a quintal. Pollock strike in generally during July; but the past season they made their appearance in May; the fishing for them usually lasts until the end of September — their average size is 40 to the quintal.

On the ledges, line fishing on the bottom can only be followed on the "slacks" of the tide; during the run of the tide, the fishermen employ themselves in taking pollock by trailing near the surface. Large hake are often taken on the ledges, with the cod; thirty of them will make a quintal. It is supposed that these hake feed upon the soft bottom between the ledges, it being such as hake are usually found upon, and that they venture occasionally upon the ledges, or are in the act of crossing them when taken.

In the Annapolis Basin, long celebrated for its fisheries, cod, pollock, hake haddock, and halibut are taken, nearly all the year round; and here also are caught those delicious small herrings, which, when smoked, are known everywhere as "Digby Chickens." Mackerel frequently enter during the season, and are caught in the herring-weirs. Lobsters are found in various parts of the Basin; clams on the flats; and on Bear Island Bar there are extensive beds of large scallops. Shrimps abound in the Gut. Porpoises, while chasing the small herrings, are often shot by the Indians. The principal fishery, however, is that for the small herrings, to be cured by smoking, which are taken altogether in brush-weirs, not exceeding 8 feet in height; these are renewed every season, the ice usually carrying away the greater portion of them at the close of the winter. The small herrings enter the Basin at the last of May, but the great bodies of fish come in June and July; after passing through the Gut, they follow up the Granville shore to the Potter Settlement, near Annapolis, and thence strike over south-westerly, to the Clements side, directly across a large bar, or middle ground. The first herrings of the season are of all sizes, from four inches in length up to the largest; in June and July the schules are of more uniform size. It is supposed that about one-half of all the fish caught in the weirs are entirely lost; almost all the weirs are dry at low water; and sometimes 300 or 400 barrels of small herrings, taken during a single tide, were formerly left in the weir to spoil. But I have been informed by a gentleman residing in the locality, that at Digby, since two years past, the refuse herring have been turned to good account by the process of grinding into a mass, and an oil being extracted from it, which realizes about 4s. per gallon.

There is also a large fishing population in the Brier Island fishing district, which includes Long Island and part of the adjacent shore.

These fisheries employ at the lowest estimate, one-fifth of the adult male industrial population of Nova Scotia, estimating their importance by the proportion of the population engaged therein, and by the aggregate value of their return for labor. The fisheries are second only to agriculture.

The Cod Fishery.

The cod-fishery is entitled to the first consideration; as it amounts in money value to considerably more than one-half of our fishery products.

The shore cod-fishery throughout the whole coast of Nova Scotia and Cape Breton, is carried on in boats, principally whale-boats, from 15 to 20 feet keel, furnished with sails, and containing from 4 to 10 or 12 men each. The fish are taken with hempen lines of from 15 to 18 thread, and averaging 30 fathoms in length. For haddock small blue cotton lines are often used, of 10 fathoms in length, called "float lines." Trailing is seldom adopted, and is employed chiefly in the capture of pollock. The season most favorable for cod-fishing is said to be during the months of June, July, and August, but it varies in different localities. The cod generally follows the course of the herring and mackerel.

The deep-sea fishery for cod employs a class of snug, good sailing vessels, of about 60 to 80 tons. "Bultow lines" or "set lines," are coming gradually into use without regard to the injury which they are said to inflict upon the propagation of this valuable class of fishes. Vessels employed in the cod-fishery are manned by from ten to thirty fishermen, according to their tonnage; they are anchored by hemp or manilla cables in from fifteen to fifty fathoms. Bait is obtained by spreading nets in the sea at a distance from the vessel, and

the fishing is then begun with hook and line, and carried on by night as well as by day, in spite of wind and storm, until the hold of the vessel is filled with fish, all split and salted. On the return of the vessel to the port the cod is landed, the process of curing completed, and they are then ready for exportation.

In the Labrador fishery seines are frequently used in taking cod. In many places the cod approaches so near the coast that at times from 4000 to 5000 may be taken at a single haul of the seine; but the hook and line is the implement most used by British fishermen in all the fisheries.

The cod fishery in the Gulf commences from the 1st to the 10th June, and continues until the end of November.

The Nova Scotian fishermen, who pursue the Gulf fishery, are generally those who frequent the banks in the Atlantic, designated "bankers;" who follow the cod to their various haunts in the Gulf of St. Lawrence.

The cod fishery along the coast of the river and Gulf of St. Lawrence, Mr. Fortin remarks, is carried on chiefly by fishermen from Nova Scotia and the United States. The number of Nova Scotian vessels engaged in the Gulf fishery in the most promising seasons, are perhaps, three hundred; about a third of the number of the American vessels.

The principal localities for cod fishing within the Gulf are the north shore of Prince Edward Island, the coast of Gaspé and Bay Chaleur, the Magdalen Islands, the eastern end of the Island of Anticosti, and along the north shore of the Gulf.

The Mackerel Fishery.

The mackerel fishery has long been an important fishery in Nova Scotia. The mackerel abounds throughout the whole Atlantic coast; and on the south and west coast of Cape Breton. The export of this valuable fish alone amounted in 1865 to $1,000,000.

In the bays and harbors of Nova Scotia, the mackerel is taken with nets and seines. The nets used are from 3 inches to 3½ inches mesh; and the seine is of sufficient size to enclose 800 barrels. The "drift-net" is sometimes used; but this mode of fishing for mackerel, which is generally practised on the coast of England, with great success, is not understood on the coast of Nova Scotia. For net fishing, strong breezes from any quarter, with the exception of heavy off-shore winds, are favorable. Off-shore winds cause a ground swell, which causes the fish to strike off into deep water, and likewise prevents the fishermen from tending the boats. Seining requires fine moderate weather, as the fish are then more sluggish in their motions, and in general concentrate in larger and more compact bodies.

In some places in the Gulf of Saint Lawrence, on the shores bordering on the Gulf, mackerel are taken with nets and seines; but the principal mackerel fishing in the Gulf is with the hook and line. This mode of fishing, which has long been practised by the American mackerel schooners, and is now adopted by hundreds of Nova Scotian vessels, not many years since was entirely unknown to Nova Scotian fishermen.

The Nova-Scotian fishermen prosecute the mackerel fishery in the Gulf with little less enterprise than their American rivals, and of late years their vessels have been so improved in fleetness and symmetry, as to bear just comparison with the American mackerel schooners, which were long reputed to be the finest vessels and best sailers of their class in the world. These schooners are generally of from 60 to 100 tons burthen. They have little depth of hold, great breadth of beam, rake very much fore and aft, and carry large cotton sails,

which enables them to sail fast, even with a light breeze. Their decks are roomy, and on them the whole work of salting, barrelling, &c., is carried on.

The Herring Fishery.

The Herring fishery, if proper care were observed in the curing, might become an increasing export, and perhaps as valuable as the Mackerel fishery. The export of herring does not however exceeed $500,000, over an average of years.

As early as March, herring are taken in nets on our coast, but the fish are so straggling, and the seas so boisterous, that except for bait, fishing does not commence until May. In this month a run of large fat herring are taken in nets upon the Banks. A net 30 fathoms long and 3 deep is passed from the stern of a boat at anchor. The free end drifts with the tide, held to the surface by cork floats; sometimes the tides carry the net down 15 fathoms in a slanting direction, thus drifting from night to morning. The net is overhauled, and from 20 to 100 dozen is the ordinary catch. The boats are stout, weatherly keel boats, with a half deck, from 5 to 15 tons, carrying a jib, fore and main-sail; and usually called second class fishermen, when entered at a regatta.

The "in shore run," a fish of smaller size, are taken in nets set to a buoy, instead of a boat, the free end drifting to the tide. These nets are often moored from one buoy to another, to preserve a permanent position across a creek or small bay. In these various ways herring are taken by the shore population of the whole Atlantic and Gulf coast of Nova Scotia, from the Bay of Fundy to Cumberland.

The immense tides of the Bay of Fundy, leaving long flats and sand-bars at low tide, and the steep trap formation of its southern coast line, have singularly altered the character of the fishing. Here the drift-net fishing obtains,—boats and nets drifting for miles upon the flow and returning upon the ebb, the nets twisted and coiled into apparently impossible masses. The shores of the trap formation being flat tables of trap, reaching plane after plane into the sea, with no crevice to hold a stake or anchor a buoy, the fishermen procure stout spruce fir trees, and lopping off the branches, leave the long lateral roots attached to them. These they place upright in rows upon the bare rock, and pile heavy stones upon the roots as ballast, stretching their nets between them. Entirely submerged at flood, at ebb they are left high and dry, and often loaded down with fish caught by the gills in the meshes of the net. These nets are usually set for a large, lean, spring herring, running for the flats in early spring to spawn. This method of fishing obtains throughout the whole trap district of the Province bordering upon the Bay of Fundy.

Around the Annapolis and Minas Basins, and on the Cumberland shore, smooth seas, sandy bars, and mud flats dry at ebb, replace trap-dyke, and boisterous waves. Here, flats and punts take the place of keel boats and whalers; and the brush-weir takes the place of the stake-net. In these weirs herrings are taken in large quantities; and in the Annapolis Basin the Digby or smoked herring, known so well in all markets, is captured in these weirs.

At the Magdalen Islands, and in the Bay of Chaleur, as well as along a portion of the coast of Gaspé (to which place our fishermen resort), immense numbers of herring are taken in the Spring. Large seines are used by our fishermen in the Gulf; and they often take at a single haul of the seine herring enough to fill from 500 to 2000 or even 3000 barrels.

The Labrador herring is almost always taken with the seine. The herring taken on the southern coast of Newfoundland are spring herring, and, being

caught out of season, are inferior in quality; and they are cured without much care, which renders them commercially of little value.

The Salmon Fishery.

The Salmon Fishery might be more appropriately classed among the River Fisheries; but there are various bays, beaches, islands, and points of land, where salmon are intercepted by nets, while seeking the river in which they were spawned, whither they will always return. The net used is of hempen twine, and of a mesh from five to six inches. The usual season for taking salmon is from April to July or August. The principal portion of salmon exported as "pickled salmon" is caught on the coast of Newfoundland and Labrador. Salmon for exportation are either pickled in barrels, dried and smoked, or preserved in tins. The latter is becoming an important trade.

Shell Fish.

The only trade in shell fish of any importance in Nova Scotia is the lobster trade. They are preserved in tins or cans, and within a few years the quantity thus prepared has grown to considerable dimensions. A flourishing establishment in Sambro cures per annum on an average 140,000 cans; and as many as 70,000 were shipped to England by another establishment at Port Mouton in 1864. The shell fish exported in 1864–65 amounted to $51,872, four-fifths of which was exported to Great Britain. In 1866 the export materially decreased.

Lobsters are taken in Nova Scotia, generally by means of a net stretched on a hoop, in the centre of which the bait is placed. This net is attached to a line which is pulled up when the fish have attacked the bait. Our fisherman will often have twenty or more of these nets attached to a cable suspended at the surface.

There is a machine also used in Nova Scotia, constructed on a similar principle to the lobster-pot. It is a cage made with lathes with an entrance at each end; it is called a lobster trap. It is not much used, being considered an expensive appliance.

Fish Oil.

The fish oil exported in the year 1864-65 amounted to $194,505. Of this amount, the proportion of $108,862 was exported to the United States. In 1866, the export of this product suffered a marked decrease.

GENERAL REMARKS.

It is a difficult task to obtain full and accurate information concerning the Fisheries of Nova Scotia, where no Government Department in the interest of the fisheries exists; and where there is no public officer to collect the necessary data on which to build a reliable Report. For the number of the population engaged in the fisheries, the number of vessels and boats employed, and the implements used, recourse is had to the Census Returns of 1861, for which data see Appendix No. 1. On my conceiving the purpose to write upon the fisheries of Nova Scotia, the ex-Provincial Secretary, Hon. Charles Tupper, to supply in some measure the want that was experienced, caused official

circulars to be sent forthwith to the Collectors of Customs throughout the province, containing numerous questions relating to each description of fishery. The facts contained in these circulars suggested much that is contained in the following observations and hints. The want of governmental supervision of our valuable fisheries will not, I am convinced, be much longer felt under your management. And if your cherished desire to bestow bounties upon the fishermen of the Dominion may meet with the approbation of Parliament, if distributed to the proper recipients, an universal impulse will be given to the prosecution of this important industry.

1. *The taking fish out of season and other injurious practices.* — The answers to this query would imply that the fishermen know no distinction between one period of the year and another for the taking of fish. They take them whenever they can obtain them, at the spawning season as at any other time. These queries are specially applicable to the herring fishery. Since 1860, a restriction called close-time has been adopted on the west coast of Scotland, which makes it illegal to catch herring between the 1st of January and 31st of May. Such restriction, however, does not exist on the east coast, where the fishery is under the protection of a Government Board. It would be a doubtful expedient to restrict the time for herring fishing in Nova Scotia, while so large a number are dependant upon the fisheries for subsistence, to whom a restriction of any sort would be a calamity.

An injurious practice exists in the capture of Digby herring by means of weirs. A correspondent writes, that at Digby Basin, "he has known parties to take out of their weirs *every year* more small herrings for *manure* than would load several vessels." "No wonder," he adds, "that they complain of the fish falling off" The practice is greatly to be deplored.

Under this head I may refer to the method of fishing called "bultow" fishing, which has many enemies in Nova Scotia and in the other colonies. First, I may state that the opinions of our own fishermen, as ascertained from the "Official Circulars," is almost universally adverse. It is affirmed, that by its use the large spawn fish which swim near the bottom are taken, which hinders propagation; and that it interferes with the hand-line fishing.

In 1859 the inhabitants of Westport and Long Island, in the County of Digby, petitioned the Legislature to interfere to prohibit set-line or trawl fishing. The Fisheries Committee recommended that the Government refer the matter to the two Commissioners of the respective nations of Great Britain and the United States. The Fisheries Committee in 1862, in their Report, (Journal 1862, Appendix 50,) refer to the trawl (?) or set-line fishing, regretting that remonstrances through Great Britain to the French Government were unavailing, and recommended that representations be made to the United States as soon as peace was restored to the nation, that this mode of fishing demanded their co-operation to abolish it.

In January, 1862, Mr. Shea called the attention of the House of Assembly of Newfoundland to this subject, referring to a Bill reported to the United States Senate authorizing the President to meet such Commissioners as Great Britain and France may appoint, to form a joint commission to frame measures to protect the fisheries on the coast of Newfoundland and North America against deterioration and destruction by means of set-lines on the spawn banks, and other destructive practices. Mr. Shea attributed the falling off in the Newfoundland fisheries during three or four years past to the system adopted by the French fishermen, of using "bultows" on the banks. Notwithstanding the remonstrances of individuals and committees, this system has grown into such general use by British fishermen, that any legislative interference would be

found unavailing. It may be added, that there is a difference of opinion regarding "bultow" fishing. Mr. John Holliday, who is largely engaged in salmon and cod fishing in the Gulf of St. Lawrence, in reply to a question from the committee of the working of the Fishery Act of Canada, stated that he saw no objection to the use of the bultow. And J. M. Lemoine, Esq., of Quebec, thought it advisable for the Legislature to encourage "bultow" fishing at Gaspé, as a far more productive system than the ordinary mode of line fishing.

Mr. Perley also recommended its adoption by the fishermen of New Brunswick, and adduced evidence to prove that it is the best mode of fishing ever introduced, as being less expensive in the outfit and keeping boats in repair. A correspondent remarks on this head: "People should be encouraged to catch fish in any way they please, *so as they catch them and cure them well.*"

2. *The throwing over offal at the fishing grounds.*— In boat fishing the fish offal is brought on shore. Where it cannot be brought on shore, the general opinion of our fishermen is that the practice is destructive to the fishery. It is the opinion of many of the Gulf fishermen, that the offal when thrown into the water furnishes food for bait fish, and for this reason is, on the contrary, beneficial to the cod-fishery; it is however, generally admitted to be a pernicious practice when pursued at the mouths of rivers. It is besides a waste of substance that might be turned into a source of profit.

It is estimated that the total yearly produce of the cod-fisheries of the North American coast is equal to 1,500,000 tons of fresh fish; of this, one-half is refuse, and is thrown into the sea or left to decay on the shore, which if converted into manure, would yield more than 150,000 tons, equal in value to the guano of the Peruvian islands, which now furnish annually from 300,000 to 400,000 tons. The manure contains, according to an average of several analysis, 80.0 per cent. of organic matters, 14.1 per cent. of phosphate of lime and magnesia, besides some common salt, a little carbonate of lime, small portions of sulphate and carbonate of ammonia, and only 1.0 per cent. of water. This proportion of ingredients render it an invaluable fertilizng agent, worth $47 per ton of 2,000 pounds.

3. *Any improvement in the nets, lines and other tackle used in the fisheries.*— The answers to this query are ambiguous. It may be inferred, either, that the tackle employed is the best suited that has come to the knowledge of the fishermen, or that they are quite up to the age in every appliance that is necessary for the successful prosecution of the fisheries. The writer is not aware to what extent nets are made by the fishermen themselves; net making gives employment, however, in many places to the fishing population in the winter months, when their ordinary occupation is in a great measure interrupted.

4. *The scarcity of bait, which is likely seriously to impede the progress of certain fisheries.*— Early in the present season the fishermen on the shores of the county of Halifax (the largest fishing county in the province), loudly complained of the scarcity of bait. It has been before remarked, that fresh fish are indispensable as bait for the shore fisheries, and when herring and mackerel become scarce, the want of it is seriously felt in pursuing the cod-fishery. So important is this matter to the colonists of Newfoundland, that the traffic in bait with the French is expressly forbidden by law. The value of bait sold in 1856 to the French fishermen, was estimated by competent authority at not less than £58,000. "The price which the French give for bait," writes Professor Hind, "operates as a very seductive temptation towards illicit traffic. In 1856, an average of 26s. to 27s. stg. a barrel was paid by them for herrings sold for bait, while the actual legitimate value of herrings for exportation was at the same time only 6s. 1d. stg."

The writer would suggest, merely as a subject of enquiry, whether in the event of the scarcity of bait becoming a serious drawback to the success of the cod and haddock fishery generally in British North America, a resort to the trawl used by the British fishermen, (wherein no bait is required), might not be advantageous. Judging from the evidence contained in a recent Report of the British Fishery Commission, which is before me, there is no mode of fishing that is attended with better results. It might be the means likewise of discovering some new species of fish that have not yet been taken on our coast; as the turbot, brill or sole, which are so common on the coast of Great Britain. It is true that the greater depth of water over our fishing grounds might render the use of the trawl impracticable in many places. On the east coast of England, however, the larger class of trawlers never trawl within twenty miles of the shore, or in less water than twenty fathoms.

5. *Defects in curing.*—Under this head, questions were submitted in the "Circular," respecting every description of fish. The replies as regards herring are to the effect that the greatest carelessness prevails in curing them, and that frequent cases of fraud occur in putting them up for exportation. Mackerel, it is stated, in many cases, are imperfectly cleaned, and in consequence soon become tainted. Cod are often cured with a deficiency of salt, and on the other hand frequently "burned" through oversalting. These defects should not exist. They not only cause loss to the fishermen — they inflict serious injury upon commerce. It is only a few years since the inspection of cured fish was secured by law. It is thought by some of our merchants that a return to official inspection is much needed; hence the question arises, How far legislation may be beneficially applied to remedy this evil? The British Commissioners in ther report allude to the fact that a Fishery Board exists in Scotland, and also in Ireland, while in England no such control is exercised over the fisheries; and they conceive that the functions of these boards, so far as the sea fisheries are concerned, might cease without any injurious effect upon the fisheries. They conceive further, "that the time has now arrived when the fishery trade may be entirely thrown open, and the artificial system created by the brand of the Fishery Board may be abolished, substituting for it the sounder system already adopted with regard to all other articles of trade." There is certainly something reasonable in the theory of committing the business of the curing of fish to the same principles of honesty and self-interest that guide other manufactures, though experience seems to have demanded an exception in the article of fish, and some important correspondence which is contained in the Commissioners' Report would seem to imply that the exception ought still to exist. A number of memorials from the leading continental merchants appear in the Appendix to the Report, which rigidly insist upon the continuance of the official brand on Scotch herring. An extract from one of these documents will characterise the whole: "The undersigned therefore strongly recommend the Royal Commissioners for the Sea Fisheries of Great Britain to leave nothing undone which will speedily and forever secure the official branding of herrings, and they further give it as their opinion that by so doing the interest of curers also will be better served than if the branding were abolished. Hamburg, Nov. 9th, 1864." Mr. Alex. Miller, of Leith, addressing George Traill, Esq., M. P., on this topic, remarks: "Among the arguments in favor of continuing the Fishery Board and the official brand, there is one which I think cannot fail to have weight with those who propose to abolish them, viz.: that in various parts of the continent the character of Scotch herring has become so thoroughly established by means of official brands, that documents representing cargoes as specified quantities, are

dealt in and passed from hand to hand in the same manner as if they represented 'consols,' or any other well understood commodity of which the description could be implicitly relied on." "I consider that the abolition of the Fishery Board would be a great calamity to Scotland, and I trust you will be able to find the means of averting such a blow."

Why the official inspection of fish was discontinued in Nova Scotia, whether from economic reasons, or because it was found to be ineffectual, the writer is unable to say; but this he has learned, that when in operation it was attended with many abuses. He has been told of one fishing settlement, where it was common for parties about to cure mackerel to bring a number of barrel-heads to the deputy inspector, who, at their request, would brand them of the quality desired, without examining the fish. It is most probable that the Legislature was indisposed to appropriate an adequate sum to maintain such a system in thorough efficiency; and the same principle of economy may have dictated the rejection by the Legislature of last session of a petition, numerously signed by the leading merchants, for a return to the system of official inspection.

6. *Is the supply of fish increasing, stationary, or diminishing?*—This can only be ascertained by comparing the exports from year to year, as no statistics exist by which the annual amount of fish caught can be ascertained. In the Table (Appendix No. 2) I furnish an abstract of the total amount of fish exported to different countries in each year, from 1853 (the year prior to the Reciprocity Treaty) to 1865. This Table shows that our fisheries have in the aggregate greatly increased. In two years from 1853 they make a bound from $1,940,129 to $3,005,000. Then, in the succeeding six years, from 1855 to 1860, they amount to $3,000,000, with little variation, except in 1858 when they fell back to $2,864,000. In 1861 they fell back to $2,390,000, and do not increase in the two following years; but in 1864 they again reach $3,000,000, and in 1865 attain $3,477,000. These figures, which prove that our fisheries are increasing during an average of years, are in agreement with the Report of the British Commissioners, as regards the British fisheries. There is, however, an aspect of the question, which the facts contained in the Report referred to suggest, that is not noticed by the Commissioners. While there has been a progressive increase in the number of men and boats engaged in the fisheries, it is not shown that the increase of the production has been in *an equal ratio*. Indeed, as regards the herring fishery, which is the principal sea fishery of the United Kingdom, it is proved that during the 25 years, terminating in 1864, the increase has been little or none. For example, in the five years ending 1844, the catch was 3,039,000 barrels; from 1845 to 1849, 3,110,000; and in the latest quinquennial period, 3,372,000. This can only show that the principal fishery has not decreased. It is from this point of view, that the question of permitting foreigners to enjoy equal rights to our fisheries with ourselves is to be considered. If the number of persons engaged is greater, and the production stationary, the proportion of gain to each person engaged must be less, unless it can be shown that prices have greatly increased. Every additional fisherman therefore, from another nation, as he is successful, must reduce the quantity assigned to each of our own fishermen. This objection to foreign right of fishing is especially applicable to our mackerel fishery, which in most cases is within three marine miles from the coast.

7. *Shell Fisheries—Propagation of Oysters.*—Although Oysters are taken in

small quantities in a few places on the Gulf Shore, they are of little account in considering this valuable shell-fish as a distinctive fishery.

The example of Canada in the planting of oyster-beds on the shores of the Gulf of St. Lawrence, is worthy of the imitation of Novascotians. As far as the experiment has been tried, it has proved successful. Captain Fortin has been most indefatigable in seeking to establish this valuable fishery on the Canadian shores.

Some idea of the extraordinary value of the oyster fishery may be obtained from the following facts, taken from Professor Hind's volume, already quoted in preceding pages. The annual value of the oyster trade of Virginia, before the outbreak of the civil war, was $20,000,000, and the oyster trade of Baltimore exceeds the whole wheat trade of Maryland. The total value of the oyster and shell-fish fisheries of the United States is estimated to be $25,000,000 per annum, or more than all the other fisheries put together. The extraordinary rapidity with which the oyster trade may become developed may be inferred from the report of M. Coste to the Emperor of the French, on the "Organization of the Fisheries," wherein it is stated that the production of oysters recommended by M. Coste, has taken such a prodigious developement that, in the Isle de Ré alone, more than 3,000 men, who had come from the interior, have already established 1,500 parks, which produce annually about 387,000,000 oysters, of the value of 6,000,000 to 8,000,000 francs.

8. *Fishery Board—Fishery Societies.*—On first approaching the subject of our fisheries, and becoming convinced of the important place which they will fill in our provincial industry, comprising one-half of the whole exports of the country, the writer was impressed with the claim they had upon legislative encouragement, to the extent at least that support is extended to other branches of industry. He thought that an organization, somewhat similar to the Central Board of Agriculture, might be judiciously established, comprised of a few of the most practical and influential men who are interested in the fisheries. The numberless circumstances which immediately or remotely affect this department of industry, would be thereby confronted; and all the legitimate aid which collected information and intelligent action can afford, would be thereby provided. It is true that the agricultural interest engages a larger number of our population, and its aggregate numerical product is considerably greater; but the relations which our fisheries sustain to the employment of our shipping, and the extension of our commerce, places them on an equality with agriculture, as deserving of support and encouragement. It is an unhappy circumstance for any country when its maritime interests is allowed to occupy a secondary place.

The British Commissioners, though they discountenance any kind of legislative interference with sea-fisheries, acknowledge the benefit of organizations in the shape of private societies. They remark: "When we consider the amount of care that has been bestowed on the improvement of agriculture, the national societies which are established for promoting it, and the scientific knowledge and engineering skill which have been enlisted in its aid, it seems strange that the sea-fisheries have hitherto attracted so little of the public attention. There are few means of enterprise that present better chances of profit than our sea-fisheries, and no object of greater utility could be named than the developement of enterprise, skill, and mechanical ingenuity, which might be elicited by the periodical exhibitions and publications of an influential society, specially devoted to the British Fisheries."

9. *Reciprocity Treaty.*—Two of the questions suggested under this head, are, "Has the Reciprocity Treaty operated beneficially upon our fisheries?" "Has it been attended with any disadvantages to our fishermen?" Of answers to the first question from every port in the Province and from several private individuals, they are nearly all in the affirmative. Of answers to the second question, the negatives and affirmatives are nearly equal; some intimating that the American fishermen take our bait from us, others that they destroy the schules by throwing over offal. The general inference, however, is, that it has been a gain to us, especially in affording us a remunerative market. One correspondent writes from the county of Guysborough, "The fishermen in this locality have, since the commencement of the Reciprocity Treaty, say for the past ten years, made more money than during any ten years previous, from the fact that they have had a free market in the United States, which is the only market where a large proportion of our fish will sell to advantage; and, although the fish have not been so abundant, the extra price has more than compensated for the deficiency in catch. If a heavy duty were put upon our mackerel and herring in the United States, the fishery would not be remunerative." He adds, "The American cod and mackerel fishermen have not interfered with us, nor injured our fisheries in this vicinity during the past ten years, and our fishermen caught more mackerel in 1864 than in any previous year."

10. *License System.*—This arrangement entered into with the United States, with the united consent of the Colonies, since the abrogation of the Reciprocity Treaty, has chiefly affected this Province. The opinion of our people regarding it may be best obtained from an extract from the Report of the Fishery Committee of last Session of the Legislature. They remark: "As to the system of granting fishing licenses to American fishermen adopted and practised during the last year by the government of this and the adjoining provinces, and to which the last named petitioners have called the attention of the Committee, the Committee agree with the petitioners in their expressions of deep regret that the adoption of such an arrangement had become or was considered necessary. Nothing could more injuriously affect the fishing interest of this province; and the Committee cannot in terms too emphatic express their disapproval of the injustice done to our industrious and enterprising fishermen, in allowing American fishermen, upon nearly equal terms, to fish in our waters, side by side with the former, while the American market is virtually closed by the high tariff, to their products. If in the words of the Colonial Secretary, contained in the correspondence on the subject laid before the House, 'motives of forbearance and good policy still demand the exercise of this privilege,' the Committee earnestly recommend that, instead of levying a pecuniary license fee therefore, steps be taken to arragne if practicable with the American Government, for the admission of the products of Colonial fishermen into the American market free, or under a more reduced tariff than that now imposed. The considerations received for the privilege would thus accrue to the benefit of our fishermen as a class, who alone are entitled thereto, as being the parties immediately injured."

I have already apprised you of the fact that in many instances the license has been evaded by American fishermen passing through the Gut of Canso. The extent to which this has occurred cannot be ascertained until returns are made by the Collectors appointed to issue licenses. By far the largest amount of revenue from this source is collected at the locality named. There was received from licenses at the Strait of Canso last year $1,151, while Capt. Fortin's Report shows but $296 collected by Canada in the Gulf of Saint Lawrence.

11. *Exportation—Markets.*—A reference to Appendix 2 will show to what markets our fish are exported. Our fisheries since 1853 have increased, with some variations, from $1,940,129 to $3,476,461 in 1865. It will be equally interesting to mark the ratio of exportation to the principal markets. In 1853, British West Indies absorbed 37 per cent. of the whole exports; United States 30 per cent; British N. A. Colonies 17 per cent.; Great Britain 1 per cent; and other countries 15 per cent. In 1855, when the whole exports reached $3,005,000, the United States received instead of 30 per cent. as in 1853, the larger proportion of 43 per cent.; British West Indies 32 per cent.; British N. A. Colonies fell to 7 per cent.; Great Britain about ½ per cent.; and other countries rose to 17½ per cent. In 1856, (the total exports being about the same as in 1855), the exports to the United States fell off 7 per cent., while those to the British N. A. Colonies increased 3 per cent., and those to other countries 4 per cent. In 1860, after a diminution in the exports during two of the intervening years, they again reached a little over $3,000,000, when we find the following proportion: United States, 37 per cent.; British West Indies, 34½ per cent.; British N. A. Colonies, 6 per cent.; Great Britain about ½ per cent.; and other countries, 22 per cent. In the year 1861, 1862, 1863, the whole exports fell back to a little over two millions and a quarter; but in 1864 they regain the maximum of the twelve years, a little over three millions. In 1865, they reach $3,477,181, which is thus distributed: United States, 42¼ per cent.; British West Indies, 33¾ per cent.; British N. A. Colonies, 5½ per cent.; Great Britain nearly 3 per cent.; and other countries nearly 16 per cent. It appears from these figures that the proportion of exports to the British N. A. Colonies has gradually decreased since 1853 from $324,935 to $184,958, although the exports have increased nearly 80 per cent. during the interval. The exports to the United States have increased from 30 per cent. to 42 per cent.; while those to British West Indies have decreased from 37 per cent. to 33 per cent. The exports to Great Britain from 1853 to 1864 varied from $15,090 to $40,000; but in 1865 they rose to $99,000.

The decrease in the exports to the other British N. A. Colonies is a matter for earnest consideration. The stimulus to intercolonial trade, which the change in our commercial relations with the United States has occasioned will, it is reasonably expected, be the means of increasing our exports of fish to Ontario and the Western country. And when the intercolonial railroad is completed, our fishing interest must necessarily receive a great impulse in that direction. It must appear desirable that we should strive to cultivate enlarged commercial intercourse with the Canadas in our native products, which will aid in cementing our fraternal relations, and in rendering our political union more complete. The markets of the south of Europe are but little sought for our dry fish; the Jersey houses of Arichat being almost alone in that trade. The only codfish shipped to Italy, Portugal and to the Brazils in 1865 was from Arichat; and Arichat very nearly reached Halifax in its exports to Spain. The high duties on fish in European countries operates against us, but the imperfect manner of curing cod in general unfits it for carriage to a great distance. The improved facilities which the recent communications of the British North American Commissioners with the Spanish West Indies and Brazil have elicited, as well as the late political changes in Europe, present a larger field for the development of this important branch of our industry.

It will be well under this section, to refer to the increase or decrease of the several kinds of fish during a term of years. This alone will determine whether either of our fisheries is declining; as in a single year, or in two or

three years, one fishery may decline, while the yield of another may be augmented. This, however, does not often occur. When one fishery fails, it generally happens that all fail; though not in the same ratio. There is least variation in codfish and scale fish; but in mackerel and herring these changes are more irregular. In 1860, the herring exported amounted to $709,730; whereas, in 1862, 1863, 1864, they did not reach $350,000; in 1865 they increased (including alewives) to $452,337. This proves that our herring fishery is on the whole going backwards. As to mackerel, in 1860 the exports was $547,386; in 1861, 1862, 1863, they fell to about $400,000; but the year 1862 shows the erratic character of the yearly catch of mackerel, for while the total exports in these three years are nearly alike, the export of mackerel in 1862 amounted to $500,000. In 1864 and 1865, our mackerel fishery increased beyond any proportion to the whole increase in our exports, being in 1864 $1,107,039, and in 1865 $1,077,273. It must be added, however, that in these two years shad and halibut are included; but they do not swell the amount beyond $20,000 to $25,000. The export of salmon shows but little variation during the six years.

12. *Statistics.*—This is a subject, improvements in which cannot be too strenuously recommended. If it is desirable to be informed of the true *status* of any one of our fisheries, its increase or its decline, the statistics concerning each must be separate and distinct. The British Commissioners remark on this topic:—"We think it a matter of great importance that fishery statistics should be systematically collected. It is only by such means that the constant recurrence of the panics to which the sea-fishery has hitherto been subjected can be prevented, and that any trustworthy conclusion can be arrived at regarding the effects of the modes of fishing which are in use." The only data that we possess for ascertaining the progress and extent of our fisheries, are the Tables in the Trade Returns.

There is one important feature presented in viewing our fisheries as a whole, viz.: the relation that they sustain to the shipping interest. Of the $8,630,693 worth of merchandize exported from Nova Scotia in 1864–5, but little more than half a million was exported in foreign ships; and the fisheries are the nursery for providing sailors to navigate the numerous vessels of every class that are employed in our commerce. We see, too, how the fisheries afford employment for our vessels. There is no staple of the country that to such a degree gives life and energy to our commerce. Of the whole exports from 1854 to 1865, more than *two-fifths* was in fish; in 1860 nearly one-half the total exports consisted of fish. I have alluded to the fisheries as a nursery for seamen, and to the jealousy which the French cherish towards them, from this consideration alone. Ere long, the British and Colonial fisheries will have to be regarded with more concern than is now extended to them; the deficiency of seamen for the British mercantile marine being seriously felt by British shipowners.

The subject of the Fisheries of Nova Scotia can no longer be considered from a local point of view. There are many advantages that must accrue to the fishery interest from the political union of the British North American Colonies. United action in the protection of our common fishing grounds; removal of disabilities between Provinces; negotiations with other States; opening new

markets for our fish; a generous rivalry among the several Provinces, promoted by periodical exhibitions; improvement in naval architecture; these, and many other considerations furnish an argument in favor of Colonial Union, in the behalf of our fisheries. From its consummation we date the introduction of a new impulse to our Colonial enterprise and prosperity. The united supervision and surveillance of our fishery interests should be hailed as a presage of future greatness.

The Laws relating to our Sea Fisheries are to be found in the Revised Statutes, Third Series, Chap. 94.

II. RIVER FISHERIES.

Not less important than the Sea Fisheries, though more limited in their extent, are the valuable fisheries which pertain to our rivers and estuaries. The fish which resort to our rivers are the salmon, the trout, the gaspereau or alewife, the shad, the bass, and the smelt. Valuable as these fisheries are, when treated separately, especially the salmon fisheries, an important connection subsists between the fisheries in the rivers and those in the ocean, since it is well known that certain kinds of fish that propagate in the rivers form a large share of the food of the cod, the haddock, and the mackerel, which abound on the coast. The gaspereau fishery is valuable in this respect, and its care and preservation is most important as regards the cod-fishery. The mouths of all the rivers frequented by gaspereaux, are resorted to by cod at the proper season, thus affording profitable occupation to the coast fishermen; and wherever the gaspereaux have been allowed to be exterminated, the cod-fishery has ceased to exist. No fish that ascends rivers from the sea in order to spawn, is of so much consequence to the cod-fishermen as the gaspereau.

So necessary is it that attention be directed to the condition of our river fisheries, that unless a vigorous legislation is interposed, the once abundant salmon, the gaspereau, the shad, and the sea-trout, will become exterminated. It is the unanimous testimony from every county in the Province that the numbers of these valuable fish are rapidly decreasing; and notwithstanding that there are legal enactments against these obstructions, mill dams are continually being constructed without the least chance for the passage of fish. Often abandoned for want of work, their mills block up many a fine stream without any effort to help the fish in passing to their haunts. The tidal netters, whenever an opportunity offers, place their nets entirely from bank to bank; the same practice is pursued at every available station of the river; gaspereaux weirs, and the shameful use of the spear on the spawning grounds, complete the list of destructive agents. Much praise is due to the gentlemen comprising the "Society for the Protection of the Inland Fisheries and the Game of Nova Scotia," for their patriotic efforts to prompt the public to an interest in the preservation of the River Fisheries. This society was founded in 1853, and has at different times published a report of its labors. Its indefatigable president, Capt. Chearnley, is known to have been engaged for a brief period by the Provincial Government as Commissioner for the protection of the Inland Fisheries. All the efforts of this Association are, however, rendered abortive, so long as County Inspectors are wholly negligent in the discharge of their duties, and the Magistrates of the country permit the laws to be violated almost before their eyes.

The Salmon.—*Salmo Salar.*

Salmon enter the rivers of Nova Scotia from the middle of March to the middle of September. They swim along the coast from southward and westward, entering first the rivers of Shelburne, Queens, and Lunenburg; later, the rivers of Halifax and Guysboro', and still later, the rivers and streams of the Gulf of St. Lawrence. But this eastwardly course is not always preserved with respect to contiguous rivers, as they sometimes reverse the usual order by appearing first in the eastern rivers. The female salmon first enters, the male follows about a month after; and lastly come the grilse or young salmon. On the passage up they take the fly of the sportsman, and are seen leaping over the natural obstacles or artificial barriers that arrest their progress, sometimes to a height of six or eight feet. They often linger in the deep holes of the streams which they are ascending. They become lean and thin almost immediately on entering the fresh waters. Their flesh loses the lively red tint and exquisite flavor, their silvery sides turn yellow, their steel-blue backs a dingy black, and reddish diffused patches their sides, head, and cheeks.

In the autumn the male salmon is seen frequenting the shallow, sandy-bottomed running streams. He is busy furrowing up the gravelly bottom with his lower jaw, in water so shallow that his tail flaps upon the surface. The loitering sportsman often perceives him working up stream so as not to foul his water, and sedulously conducting his mate into the furrow, where he impregnates the ova streaming from her teeming sides, or rushing out upon the shoals of young males in clouds about him, each a miniature salmon, with hook and bill, though barely six or seven inches long. They are now said to return to the sea, principally because we find them there in early spring. Some say they remain in the river or lakes all winter; and no doubt many do. Capt. Chearnley is of opinion that this is caused by debility; and that in the spring they are found in an exhausted state. It may be said that the salmon in Nova Scotia have their principal run from the ocean to the lakes in April, May, and June; that they spawn in November, and immediately return to the ocean. But this is only generally true.

The Sea Trout.—*Salmo Canadensis.*

The sea trout which frequents our rivers had been improperly described as the *salmo trutta*, or European species. Frank Forrester (Mr. Herbert) doubted whether it was not a grilse, or salmon of the third year. Mr. Norris, who has written a valuable book on the fishes of the North American rivers, and on the art of taking them, has proved the sea-trout of New Brunswick and Nova Scotia to be the *Salmo Canadensis* of Colonel Hamilton Smith. Fresh from the sea, compared with a brook-trout, the sea-trout has larger and more distinct scales; the form is not so much compressed; the markings on the back are lighter, and not so vermiculate in form, but resemble more the broken segment of a circle; it has fewer spots, which are also less distinct. It is more slender until it reaches two pounds; a fish of seventeen inches (including the caudal), after it has been some time in fresh water, weighing only a pound and three quarters, while a brook trout of the same length, in good condition, would weigh three-quarters of a pound more. They become more robust, however, as they increase in weight.

The tide water mouths of the various rivers are the favorite resorts of this

beautiful fish. In these waters he remains till August, sometimes running up the rivers with the tide a few miles, then again running seaward. A very gaudy fly will tempt him out of cover, in the thick tangled kelpy marine forests. He is taken in our tide waters from May till August, both in the Bay of Fundy and along our Atlantic sea-board, and at Cape Breton. After August he is found in the lakes and streams. In winter they are occasionally taken through the ice with bait, from one to twenty miles from the salt water, and they have been seen returning to the sea in March. W. C. Silver, Esq., of Halifax, who has studied their habits for years, and in waters running through his own lands, is of opinion that they remain all winter in the fresh water, leaving the tideway in August, that they rapidly change their color and shape in fresh water, approximate to the brook trout in both, but are always distinguishable. The weight of this fish goes as high as seven pounds; their general average is about two pounds. The flavor of its flesh is thought to exceed salmon.

The rivers eastward from Halifax abound in this description of trout. They are frequently taken in nets, and preserved in pickle. To the sportsman these rivers furnish capital fishing. One party of sportsmen, not very long since, hired a schooner and sailed along the coast, stopping at the mouths of the rivers, where they found the sea-trout in great abundance. In Tangier River, three of the party caught twenty-one dozen in the space of three hours, frequently hooking two at a time. This occurred before Tangier became a gold-mining settlement; but the river still abounds with these fine trout.

The Smelt.—*Osmerus Viridescens.*

This savoury little fish, though found in the greatest abundance in the smaller streams that flow into the sea, has never been deemed of sufficient worth as to become an article of exportation. They are very extensively used by the inhabitants who reside near their *habitats*, and are very generally sold by hawkers in the city of Halifax. It seems almost an offence to claim for the smelt a relationship with the *elite* family of the salmonidæ; nevertheless naturalists persist in calling it *a salmon*. They come up the river to spawn as far as the head of the tide. When the ice disappears in the spring, they ascend the small streams and rivers in large schules to spawn, and are taken in great quantities from the shores by means of dip-nets, or by weirs built of spruce boughs and twigs. In the month of May, just above the tide-water, immense schules of them are directed in their course so as to pass through a narrow opening, formed by piling stones in two oblique rows, nearly together at the upper ends. As the smelts rush through in a continous stream, they are dipped up with scoop nets. It is in season during the winter months, when it is taken through holes in the ice.

The Striped Bass.—*Labrax Lineatus.*

Although other species of the *percidæ*, or perch family, are found in our rivers, the striped bass is the most important, not only from its excellence as an article of food, but from its large size, sometimes obtaining a length of three feet. It is not abundant in Nova Scotia, and for this reason its preservation and increase should become a matter of solicitude by the promoters of our river fisheries.

Along the shore of the Gulf of Saint Lawrence, the bass make their appearance in large schules, in the early part of September. They keep around the islands, and between the outer bar and the beach of the lagoons, where they are often taken in nets, and also at night with torch and spear. As the season advances, and the weather becomes colder, they penetrate into bays and arms of the sea, and ascend the rivers at some distance, where they spend the winter resting on the mud in a half torpid state. The bass which are brought to Halifax for sale are generally taken in the rivers or estuaries of the Bay of Fundy. Where the shad spawns is the natural feeding ground of the bass or rock-fish, and this capacious Bay is the famed rendezvous of the shad.

Some fine specimens of the bass of Nova Scotia have been exhibited in the Nova Scotian collection at the London and Dublin Exhibitions, and uncommonly fine ones were procured by Mr. Townsend for the Paris Exhibition collection.

The Shad.—*Alosa Sapidissima.*

The "king" of the herrings is rarely seen on the Atlantic coast of Nova Scotia. Occasionally it is taken in the nets that are set for salmon. Its favorite resort is in the muddy waters of the Bay of Fundy, where it attains its highest perfection.

It is said by the fishermen of the Bay of Fundy that there are two species or varieties—one species, pursued by dog-fish, sharks, and other fish of prey, appear in the Bay of Fundy about the month of June, never go into the fresh water, and are never found with spawn; the other species, called river shad, on the contrary, are usually replete with spawn, and are distinguished from the sea shad by their brightness of color. This opinion is not confirmed by any description of the shad by naturalists; they know of but one species. (See evidence before Fishery Committee—Journals 1845.)

"They arrive," writes a reliable informant, "from the 20th June to the 10th or 15th of July, and the fishing continues from four to eight weeks, when they leave the Cobequid Bay and the Basin of Minas, going down through the Gut, between Parrsborough and Blomidon." My informant entertains the opinion that the shad caught in June, July, and August, are the same that frequent the American coast early in the spring, in the bays and rivers of Virginia, later at New York, continuing along the coast of Maine and New Brunswick. He adds that they feed on a vegetable substance which grows along the shores; on the flats they never take the bait; and the farther east they are taken the better their quality. This notion of their southern origin seems to have been accepted by Mr. Perley, whom I have quoted in my Descriptive Catalogue of Fishes; but Mr. Norris, an American writer on Fishes, discards it.

This rare fish is less plentiful than in former years. Sixty years ago, women and children, and even the house-dog, (in many instances an excellent fisherman,) could go at low water and catch as many as they could carry home. There were two ways of capturing them next in vogue: first, by spearing them in the holes or gullies made by the swift current on the sand flats; second, by setting seines across the mouths of the creeks and rivers. Next were introduced the weirs built of strong stakes, interlaced with brush. The drift-net is the latest and best appliance for shad-fishing, and is adopted on both sides of the Bay. The drift-net allows the small fish to escape, which are captured in large numbers in the weirs to the destruction of the fishery. These nets are 45 meshes deep, and many of them 300 fathoms long. On the Colchester side of the Bay there are about one hundred boats and nets. The shad are caught

in the night, as they will not mesh in the day time. The boats go out in the evening and return in the morning with from sixty or a hundred to ten or twelve hundred fish.

The shad is of some importance as an export, although it cannot be ascertained what quantity is actually exported in each year. In 1860 the census gives 7,649 barrels as the quantity cured in the Province, of which Colchester contributed 3,691 barrels; Kings, 1,274 barrels; Hants, 1078 barrels, and Cumberland 652 barrels. The writer is unable to ascertain whether its increase is within the compass of human aid or foresight; its habits being so little known, differing in many respects from those of the *salmonidæ*, and from its congener the alewife.

The Alewife or Gaspereau.—*Alosa Tyrannus.*

This excellent fish, it is to be regretted, is fast disappearing in Nova Scotia. The mills erected on our numerous streams have either stopped his progress to the upper waters, which his instinct has taught him to choose for his spawning ground, or the saw-dust and litter from the mills has frightened him backwards in his course, and the process of procreation has thus been arrested.

The ascent of the alewife to the lakes is made in the latter end of April or beginning of May. The moment the spawning is over, the instinct of the gaspereau teaches him to return to salt water; but there seems to be some difficulty in determining the exact time. Some observers put it at twenty-one days, in which time, from leaving the sea, the gaspereau has spawned and commenced his return, allowing that he has met with no obstruction. Others say that they have met them during July on the lakes; and others, that they have seen them passing down in August. But all agree that the young fry go down to the sea in September and October, at which time they are over four inches in length.

October seems to be the last date for even the fry to be seen in fresh water. The ascent to the lakes, and return to the deep water, have occupied some three months. The other nine months they are hid from us. They are taken in small numbers, generally with herring, sometimes with the mackerel, as late as the 24th November, on our coast, but they are only stragglers; the great body that swarmed our rivers must leave our coast to return in spring. They return either to deep soundings or to the south. After gaining the salt water the lean, weak fish, rapidly recruit, become silvery, very fat, and a few individuals have a deep blue band of one inch and a quarter extending along the back. Our fishermen call them blue backs, readily distinguish them, and maintain them to be a separate fish; but this is only conjecture.

As an article of food when eaten fresh, it is not held in great estimation. When slightly struck with salt and smoke-dried, it is called a "kiack," and is very palatable. Many are cured in this way about Lunenburg and the Atlantic sea-board. The Indians dry them in the sun about their wigwams, but the usual way is to salt them in barrels like herring, and use them in each family for home consumption. Their leanness makes them a good export for the West Indies, as the fat herring becomes completely decomposed into oil by the climate.

By the Government returns for 1861, the total number cured is put down at 12,565 barrels. Since that date they are not returned separately, but classed with common herring.

THE EEL.—*Anguilla Vulgaris.*

The eel, although in reality an excellent food-fish, is not much esteemed in Nova Scotia. It is very abundant in our rivers and estuaries. It is not, according to our definition, a river fish, if, as is generally supposed, it spawns in salt water, and migrates to fresh water; the very reverse of shad, herring, and salmon. It finds its way into many of the lakes, and will shift its quarters from one creek or lake to another, by crawling through the grass. It is caught in a variety of ways, but seldom with the hook and line, except when he brings the youthful angler to grief, twisting his line into a Gordian knot, that compels a resort to the jack-knife. In summer it is caught in long round Indian baskets, called eel-pots; it is also taken by torch-light with the spear. In winter it is taken through holes in the ice by spearing it in the mud, where it there lies torpid.

Among the other species and varieties of fish that abound in the inland waters of Nova Scotia, I might enumerate the common brook-trout; the *salmo gloverii*, a very beautiful dark brown trout, misnamed a grayling; the *salmo confinis*, a large blackish fish found in our interior lakes, of coarse flesh, and not abundant. There are two species of the *percidæ*, and several species of the *cyprinidæ* or carp family; but none of the "white fishes" (as they are called by pisciculturists) are esteemed where the trout can be obtained with little difficulty. The trout is, however, fast disappearing from lakes near the metropolis, which formerly teemed with them. The trout seeker must now repair to more distant waters with any hope of success; and the farmer or woodman who was wont to repair to the neighboring lake for his impromptu meal, no longer enjoys so cheap and rich a fare. But in the interior lakes trout are still abundant, and in many remote places leap and sparkle in the sunlight, and pursue their gambols unmolested by the sportsman; startled only by some falling tree or loosened stone rudely plashing the glassy lake, or where their quiet retreat is invaded by the prow of the Indian's canoe.

OBSTRUCTIONS IN RIVERS.

These obstructions have long existed in the rivers of Nova Scotia, and although partly from the occasional enforcement of the laws for the regulation of River Fisheries, and partly from the efforts of the Society for the protection of the Inland Fisheries, some improvement is visible, the condition of our rivers at the present time is in many places as deplorable as it was described to be in 1854. Under Governor LeMarchant a special enquiry was instituted for the information of the Legislature. Since then no official general enquiry into the condition of the rivers of Nova Scotia has been made. At the period adverted to, out of twenty-seven rivers reported upon, only five were not totally obstructed, and in such a manner that unless in case of high water, fish, even of the smallest size, could not pass and repass. On some of the rivers there were accumulations of refuse lumber and slabs, which blocked up the bed of the river in some instances to the height of twenty feet. Another important injury to the salmon fishery which was adverted to in one of the returns, was the use of the small mesh net, which proved destructive to the run of salmon the ensuing season by taking the grilse or young salmon which had not attained more than one quarter of their growth. A nefarious practice was discovered in one locality, of setting eel-pots at the tail of the mill-flooms, in

which *bushels of young salmon were destroyed and given to the pigs.* The erection of brush-weirs completely spanning the river, and the setting of nets entirely across the stream, were practised in many places without any dread of the law.

The Committee of the Legislature manifested so deep an interest in the subject that they gathered from authentic sources much valuable information concerning the habits of the salmon and the manner of artificial propagation, and answers to questions submitted to experienced persons, all of which was embodied in a pamphlet, and published by the Government. They referred particularly to the answers of Captain Chearnley, as comprising information on the subject of our own fisheries not hitherto submitted to the public. One looks in vain through the Journals of the Legislature, during the period of six years, from 1857, for any legislative action regarding the river fisheries.

In the Journals of 1864 I find a valuable paper on the subject of our river fisheries, over the signature of Hon. A. G. Archibald, who was then Chairman of the "Law Amendment Committee." It is concerning a bill submitted to the Legislature with reference to these fisheries. It treats of the criminal neglect of the fisheries, and urges the employment of the most energetic means for their restoration and protection. It recommends the spreading broad-cast among the people such information as to the habits of the fish, and the necessity of protection, "as will enable them to appreciate the policy on which our legislation is founded." It suggests the adoption of ladders, such as were being used in Great Britain with success, and recommends that private parties should be encouraged to obtain possession of our rivers, with a view to experimenting in matters connected with the conservation of fish and the protection of the river fisheries. The Committee also advised the Government to offer a prize for the best essay on the habits and natural history of the fish resorting to our rivers, their protection, &c., and to publish and distribute the same extensively in the Province.

The following year (1865) the suggestions of the Committee respecting fish-ladders were taken up by the "Game and Fisheries Protection Society," when a model of the ladder was prepared and submitted to a Committe of the Legislature, who recommended that it be adopted, and a similar model sent to the Clerk of the Peace for each County or District in the Province, and that provision be made in the law to make the use of such fish-ladder imperative; and that a penalty be enforced against any person taking any fish within them, or within a distance of sixty yards from them.

Fishery Protection Society.

A Society called the "Provincial Association for the Protection of the Inland Fisheries and Game of Nova Scotia," was founded in Halifax in 1853. This society was initiated in the same year that unusual interest was manifested by the Provincial Legislature in the subject of our river fisheries, which I have already referred to. The institution of this society has had a beneficial effect in urging upon our Legislature from time to time to adopt more active measures for the preservation of the inland fisheries. The early history of the society was marked with singular activity in carrying out its object; and though it has suffered an interval of inactivity, it has again renewed its vigor, and has, within the last three years, without any legislative assistance, succeeded in restoring certain rivers in the Province, especially in the County of

Halifax, to a hopeful condition. If the society languished, it was for want of funds to carry out its schemes. It has throughout enjoyed the knowledge and experience of a gentleman already referred to as its President, and has had other military gentlemen, and some of our most influential citizens as its members and managers.

Among other efforts, the society has published valuable papers relating to the Inland Fisheries, for general circulation; and at convenient intervals has published a report of its labors. Finding that efforts of this kind were ineffectual in arresting the declension of the fisheries, and that in the community generally the most lamentable apathy existed, its managers resolved to appropriate its limited funds to the employment of overseers in rivers in the County of Halifax, to carry out the laws which the Sessions neglected to enforce. As the result of the activity and determination of these overseers, directed by the Council of the Society, the report of 1865 shows that the fishways and mill-dams in Musquodoboit River were opened, and a large number of salmon had ascended the river; on Cole Harbor and Lawrencetown Rivers, proper gates were made in the dams, and the run of fish was extensive; Indian River had been well attended to, and during the season very many fish ascended the waters. The report of the Society for 1866 will be found in the Appendix (No. 4), which exhibits the improved condition of the principal rivers in the County of Halifax, effected wholly through the exertions of this society.

During the recent session of the Legislature, a deputation from the society were granted a conference with the Fisheries Committee, who at their instance, recommended to the House the appointment of an efficient Inspector of Inland Fisheries for the whole Province. This suggestion, though acted upon by the House of Assembly, was defeated in the Council, who deferred the bill on the ground that the Inland Fisheries would in a short time be transferred to the control of the General Government of Canada. Extracts from the report of the Fisheries Committee, recommending the appointment of an Inspector, and eulogizing "the disinterested and useful efforts" of the society, is produced in the Appendix (No. 5.)

GENERAL REMARKS.

1. *Fishery Laws of Canada.*—As all our fisheries are now placed under the control of the Dominion of Canada, the laws of the several Provinces will be assimilated; and as more vigorous measures have long been adopted by Canada for the protection of her River Fisheries, any more beneficial enactments that Canada may enjoy will doubtless be embodied in any general Act that may emanate from Parliament. Among the enactments that are peculiar to Canada, are in substance the following:

The Governor in Council may make any regulations that may be found necessary for the better management of the fisheries.

The close time for salmon is between the 31st July and the 1st May.

Fly-fishing is permitted between the 30th April and the 31st August.

The taking of fry, parr, and smolt is prohibited; and grilse or salmon under three pounds weight, when taken in nets, are to be liberated.

Meshes of nets used for capturing salmon, to be five inches in extension.

The use of nets or other apparatus to be confined to tidal waters, except by special license from the Commissioner of Crown Lands.

No salmon to be captured within two hundred yards of the mouth of any stream which salmon frequent to spawn.

Any one throwing deleterious substances into any river, shall incur a fine not exceeding one hundred dollars; and saw-dust or mill-rubbish shall not be thrown into any stream frequented by salmon or trout, under a like penalty.

The owner of a mill-dam is required to bear one-half the expense of constructing a fish-way; and half is borne by the Government.

The Commissioner of Crown Lands may authorize to be set apart, and may grant leases for any river or water for the natural or artificial propagation of fish.

[The laws for the regulation of the River Fisheries of Nova Scotia are in the Revised Statutes, chap. 95.]

2. *Leases and Licenses.*—In Canada, where nearly all the productive rivers in which salmon are to be found run through remote wild lands, and are the property of the Government, fishing leases or licenses are issued by the Commissioner of Crown Lands, for a term not exceeding nine years, and for a longer term by order of the Governor in Council. In the Lower Provinces, where proprietary rights are largely involved, the license system would in most localities be attended with insurmountable difficulties. There are, nevertheless, two aspects in which the payment of royalty for river privileges is advantageous. However repugnant to our cherished ideas of common right in the property of fish, facts have proven that this right has been shamefully abused; that the most reckless and even wilful destruction of fish has been pursued; and that the ignorance or wilfulness of the many has well nigh destroyed the bird, and that we have all but lost the glittering egg. Fishing being confined to fewer persons, who pursue it as a chosen employment, with proper guards against the evils that existed when the rivers were common property, the interests of the whole community are likely to be better promoted. The other aspect is that of revenue; and it is in all respects as just that the revenue should be augmented from a sovereignty in rivers as from a sovereignty in the lands through which they flow.

3. *Inspectors or Overseers.*—The appointment of Overseers in Canada is vested in the Commissioner of Crown Lands. This centralization system is vastly superior to ours, where the wardens are appointed by the Sessions. But even this system does not dispense with the necessity of one active Supervisor of experience, and, if possible, of scientific knowledge, as recommended by the Committee on the Fisheries in their Report to the Legislature.

4. *Obstructions, &c.*—As to the pernicious practice of fouling our salmon streams with saw-dust and other refuse, and the injury inflicted by fixed nets and weirs, Russell, in his work on the salmon, in substance writes: "Any white object placed in the track of the fish, irrespective of its capturing power, will drive the salmon away." In Nova Scotia, as in Canada, fixed nets and fixed weirs are legalized. There is little doubt that the existence of these fixed engines is the principal cause of the low condition of the salmon fisheries in both Provinces. In 1860 the British salmon fisheries were in a wretched condition, and three commissioners, at the head of whom was Sir W. Jardine, Bart., the eminent naturalist, were appointed to ascertain the cause of their decline. After a great deal of labor these commissioners presented an elaborate report to the Queen, in which they state: "We are prepared, after a full consideration of the case,

to recommend the total suppression of all fixed engines on the estuaries and sea coasts. These engines, with but few exceptions, are of modern invention. Stake nets have been scarcely known in England until within the last fifty years. * * * And they are opposed to the whole aim and spirit of the fishing laws, the object of which, as has been fully shown, was to secure to the salmon a free passage to and from the sea, and to cause an equitable distribution of them throughout the rivers. These engines are baneful to the fisheries, not only on account of the number of fish which they destroy, but also because they scare and drive them away to the sea when they come in shoals seeking the rivers, thereby exposing them to be injured or destroyed in a variety of ways." The remedial policy which is herein indicated, resulted in raising the money value of the salmon produce of the small rivers of Britain, often polluted by the discharges from the mines and manufactories, to £800,000 stg., or $4,000,000 per annum; while the money value of the salmon fisheries of Canada was, in 1865, on the authority of Commander Fortin, only $23,000, and of Nova Scotia probably $40,000. This is a lamentable contrast, when we consider the superiority of the British Provinces in their possession of the most magnificent salmon streams that exist in any country in the world. No later than 1815, 800 tierces of salmon were taken every year in the streams of one river in Nova Scotia. Salmon then swarmed so thickly in rivers of these Provinces, that are now nearly deserted, that they were thrown out with the shovel, and even with the hand; but the ignorant destructiveness of one class, and the selfish cupidity of another, the erection of mill-dams without fish-ways, the system of choking the streams with saw-dust and refuse from the mills, of spearing by torchlight, of over-netting, and fishing out of season, have produced their inevitable results.

5. *Fish-ladders.*—As to fish-ladders, Mr. Buckland has remarked concerning the United Kingdom: "The great advantage of these salmon-ladders is, that they have overcome the great difficulty which formerly existed, namely, the non-interference with the mill-power of the country, and at the same time allowing the salmon to pass from the upper to the lower parts of the river." We have not yet overcome this difficulty in Nova Scotia. There still exists, and will continue for some time to embarrass our legislation, a contest in many localities between the mill interest and the complete and successful restoration of our valuable rivers. It has been already remarked, that intelligent men who reside in our northern counties affirm that the application of the law to those rivers, owing to the inequality in the volume of water at various intervals, would compel them to stop their mills wholly. On the Atlantic coast, too, there are said to be some impracticable localities. Hence the importance of an efficient Inspector, who could examine these places, and report to the proper authorities. It would be impolitic to stir up a war between fish and lumber, because both are necessary; we must build ships and houses, and we must obtain fish in plenty. We can do both.

6. *Propagation of Fish.*—Artificial propagation, in the estimation of many, is not required in the present condition of our fisheries. The unusual abundance of salmon the present season, owing, it is believed, mainly to the excessive winter's rain that has swelled our rivers, will seem to strengthen the prejudice on the side of the sufficiency of natural increase. The system of pisciculture, however, judiciously prosecuted, would overcome the fluctuation which the natural supply suffers in successive years. It would render our annual returns a certain and an increasing quantity; never, however, pro-

bably, to reach again the point where it was stipulated in the indentures of an apprentice that he should not be fed more than twice a week on salmon. One of the Reports of the Fishery Protection Society indulges, however, in the following prediction: "The time will soon arrive when the breeding of fish will employ as much capital and labor as the breeding of stock; when the rivers of this Province will be estimated of more value than the lands they drain, and be as jealously guarded from injury as the dykes that protect the marshes of King's County."

7. *Statistics.*—It is quite impossible to ascertain the progress or decline of the River Fisheries from the annual statistics. Even if the Trade Returns afforded a correct exhibit as to quantity, their arrangement is such that data cannot be obtained concerning each description of fish—alewives being classed with herring, shad with mackerel and halibut, and salmon with trout. This is an oversight that must be remedied, as each of the fisheries that are thus grouped with others are of sufficient importance to be kept apart. But if thus separated, we could not ascertain the catch of salmon, since a large proportion of the export of salmon is previously imported from various localities in the Gulf of St. Lawrence. The only data that approximate to accuracy are the Census Returns. Taking the figures in the Census of 1851, and comparing with the Census of 1861, we find the following result:—Salmon cured in 1851, 1669 barrels; in 1861, 2481 barrels, and 2738 smoked salmon. Shad cured in 1851, 3536 barrels; in 1861, 7649 barrels. Alewives cured in 1851, 5343 barrels; in 1861, 12,565 barrels. With respect to salmon and shad, the foregoing figures prove no more than that we have held our own; because the home consumption has decreased, as it has been found profitable to export them. With alewives, the statistics afford a more correct estimate, because they have never been largely consumed at home.

Exportation.—The statistics of exportation, as regards salmon, may serve to show the general decrease in the salmon fisheries of the British Provinces, as all the salmon exported from Nova Scotia that are not taken in its own rivers are captured in the Gulf of Saint Lawrence or the Newfoundland and Labrador coast. In 1860 the value of our total export of salmon was estimated at $96,184; with slight variations, it decreased in 1865 to $62,117. From 1860 to 1865, the value of the exports declined about $34,000. But while salmon to the amount of $62,117 were exported in 1865, the imports amounted to $42,588; estimating, therefore, their value as $20 to each barrel, it would make the *export* of salmon caught in Nova Scotia to be 1,000 barrels—about one-half the whole quantity cured. Large numbers of salmon are exported to the United States, fresh, packed in ice; and many thousands of pounds are put up in tin cases, and exported under the name of "preserved salmon." The quantity of shad and alewives exported cannot be arrived at, for the reason already stated.

CONCLUSION.

No country in the world, with the exception of Scotland, possesses so many fine salmon streams as does Nova Scotia; and the salmon amongst fishes is as the ruby or the diamond amongst the gems; every well-inhabited salmon stream is a true Golconda. Unlike the mine, you cannot, even by countless drains upon it, if the laws of nature be observed, exhaust its riches.

Under proper management there is not a stream in the Province which might not, and would not, yield many tons of salmon and sea trout every year, and this not for a time, but for all time. A ton of salmon is worth upon an average, $300, and the river yield of this noble fish might, in the rivers of Nova Scotia alone, be equal to at least $100,000 per annum. Nor would this be the only gain; the number along our coasts and estuaries would go on increasing in the same proportion. It is easy to state this truth, it is easy also to prove it, both from facts and experience; but the grand difficulty is to make people in general feel it, and act accordingly. "One can easily understand," writes a newspaper correspondent, "what would soon be the result, were every cow and calf in the country shot down, either for their skin or out of pure love of destruction, whenever one or the other could be got at. The supply of beef would speedily come to an end, and everybody would be ready to execrate the wickedness and folly that brought about so great a calamity. But in reality is the folly or the crime less because the creature destroyed lives in the water instead of upon the land? A dozen average salmon will bring as much money as an average cow, with this difference, that the feed of the former costs nothing, while that of the latter comes to a fair sum of money every year. There is not a river in Nova Scotia which, by getting moderately fair play, would not yield during the season at least 500 well grown fish, which would be equal in value to about fifty cows, while the larger rivers would yield ten times the quantity. We can calculate the loss, and can show it upon paper, but still, unless we can bring home in some shape or other the reality of it to the understandings of the dwellers by these rivers, they will be likely to pay little attention to it."

From the prominence which is given to the interest of the Fisheries in the constitution of the Executive functions of the first Privy Council of the Dominion, it is confidently hoped that a new impulse will be given to the protection and development of the River Fisheries of British North America.

The increased facilities for transport which the Intercolonial Railway will secure for the Maritime Provinces must largely assist in the commercial development of the River Fisheries. Salmon can be propagated and taken in Nova Scotia with less labor and expense than in any of the Provinces, and in their fresh state will find a ready market from Montreal to Detroit, and even beyond, while cured salmon will find their way to profitable markets in the far west.

Whether the rivers of Nova Scotia are to become an increasing source of piscatory wealth, or are to be deserted by its finny inhabitants, so that the presence of the salmon, the trout, the shad, and the alewife in countless numbers, will constitute only tales of past times, will be rendered no longer doubtful, if there be united the intelligent co-operation of the people throughout the counties with the power that devises the necessary laws for the conservation of the fisheries. The present is a crisis in the history of the River Fisheries of British North America. If they are allowed to enjoy means and efforts for their preservation that are periodical only, revival must soon yield to retrogressione but if wise and energetic measures are adopted by Parliament, commensurat; with their importance as a source of national wealth, nothing that has been predicted concerning their cumulative fertility can possibly be unfulfilled.

I have the honor to be,
Sir,
Your very obedient servant,

HALIFAX, N. S., Can.,
5th November, 1867.

T. F. KNIGHT.

APPENDIX.

No. 1.

STATISTICAL TABLE, *from Census Returns of* 1867, *in the order of Counties according to value of fish caught and cured, in that year.*

COUNTIES.	Vessels employed in the Fisheries.		Boats engaged in the Fisheries.		Nets and Seines.
	No.	Men.	No.	Men.	
Halifax	175	887	1932	1479	12006
Guysborough	85	340	1080	631	7991
Richmond	109	587	884	1120	5424
Lunenburg	138	1380	969	1107	3038
Shelburne	96	617	780	963	3717
Yarmouth	83	615	266	236	1612
Digby	56	302	295	405	523
Cape Breton	23	137	679	598	3423
Inverness	38	215	424	716	1267
Queens	55	452	278	342	674
Victoria	3	13	413	320	1398
Annapolis	3	9	184	109	507
Antigonish	3	17	213	280	990
Kings	6	28	50	43	141
Pictou	2	17	81	17	422
Colchester			118	163	155
Cumberland	4	13	89	85	495
Hants	1	4	81	75	182
	900	5633	8816	8689	43965

NOTE.—The number of men returned asengaged in the Fisheries does not include the large portion of the population residing on the coast who unite farming with the occupation of fishing.

No. 2.

Table of Annual Exports of Fish and Fish Oil from the Province of Nova Scotia, to all Countries, from 1853 *to* 1866 — *value in dollars.*

YEAR.	Great Britain.	B. N. A. Colonies.	British West Indies.	United States.	Other Countries.	TOTAL.
1853	15,260	324,935	717,686	589,831	292,415	1,940,127
1854	39,360	306,580	999,335	822,580	435,335	2,603,190
1855	11,730	197,725	936,625	1,308,455	550,465	3,005,000
1856	19,295	289,325	940,650	1,111,105	689,635	3,050,010
1857*	Trade Returns not published in 1857.					
1858	39,225	123,105	843,080	1,054,800	803,950	2,864,160
1859	4,295	160,975	930,525	1,249,730	843,340	3,188,865
1860	13,847	196,498	1,065,175	1,152,401	666,578	3,094,499
1861						2,390,122
1862						2,335,608
1863	24,146	212,643	1,010,121	508,744	635,013	2,390,667
1864	29,000	188,374	1,033,131	1,137,595	657,342	3,045,442
1865	99,580	184,958	1,160,610	1,471,661	560,372	3,476,461
1866	29,747	170,018	1,100,733	1,429,848	647,288	3,378,766

* The fiscal year changed to 30th September in each year to 30th September in following year.

No. 3.

Table of Value in Dollars of each description of Fish exported from the Province of Nova Scotia, in each year, from 1853 *to* 1866.

Year.	Codfish.	Scalefish.	Mackerel, Shad, and Halibut.	Herring and Alewives.	Salmon and Shad.	Salmon and Trout.	Shellfish.	Smoked and Preserved.	Fish Oil.	Totals.
1853	795,000	83,835	*386,215	440,670	98,035	.....	.....	.....	136,260	1,940,015
1854	975,425	14,874	*970,310	444,235	80,285	.....	.....	.....	122,000	2,607,129
1855	1,115,950	122,375	*1,107,255	420,430	103,420	.....	.....	.....	135,570	3,005,000
1856	1,250,210	153,530	*893,100	496,130	82,945	.....	.....	.....	174,095	3,050,010
1857	Trade Returns not published.									
1858	1,255,225	120,010	*586,370	627,000	85,780	.....	31,670	.....	157,105	2,863,160
1859	1,536,820	75,795	*588,415	725,215	96,805	.....	20,755	.....	145,065	3,188,870
1860	1,413,361	100,450	580,290	739,490	.....	96,184	27,013	.....	137,711	3,094,499
1861	1,199,574	95,229	369,469	527,980	.....	65,118	17,711	.....	115,031	2,390,112
1862	1,127,505	117,389	511,637	377,275	.....	49,640	15,355	.....	136,307	2,335,108
1863	1,268,231	125,253	425,488	354,538	.....	69,499	14,460	.....	133,198	2,390,667
1864	1,278,580	153,319	1,107,039	315,042	.....	63,826	22,104	6,630	101,702	3,048,242
1865	1,411,317	214,594	1,077,273	452,337	.....	62,177	51,872	12,386	194,505	3,476,461
1866	1,388,360	200,499	1,008,737	544,135	.....	61,236	21,953	20,020	133,826	3,378,766

Note. — The figures in this column marked with an asterisk denote mackerel only.

No. 4.

Report of Council of the Inland Fisheries and Game Preservation Society, 1866.

St. Margaret's Bay.—The warden for Margaret's Bay District has been very energetic during the past season, and reports all the rivers clear, with the exception of Ingraham's River, where still, as formerly, great opposition is shewn to the enforcement of the law. Your committee press the most serious attention of the society to this fact, with a view of stringent measures being adopted next season. Few, if any, fish have been taken by fishermen on the river during the past season.

The Indian river shewed a great improvement on past years as regards sport.

Owing to a stoppage at Rhino's Mill, the Council have caused a rock to be blasted to create a further enlargement of the channel, and have further closed two tributary brooks that diverge from the main stream, to increase the supply of water.

East River, Chester Bay.—The Council have here rendered the Grand Falls practicable for salmon, thereby opening up the whole of the upper waters of the river. The obstacle now removed was situated about 1½ miles from the salt water, and we are glad to report that fish were observed ascending the falls immediately after the alteration was affected.

Sackville River.—The Secretary was authorized to effect an opening in the dam at this river, but owing to the unusually high freshets which prevailed, nothing could at that time be effected to remedy the evil. In the ensuing spring it is intended to remove the obstruction.

Again, with regard to this river, the Council beg to report that Messrs. Piers and Blaiklock, having obtained information that nets were illegally set across the river above the dam, proceeded to the spot and effected a seizure of a net which was found set totally across the stream. From information received, it was understood by these gentlemen that numerous other instances of a similar nature were of frequent occurence, the nets being set every evening at dusk, and taken up every morning. The Council beg further to report that the overseer, appointed by the Sessions for this river, stated that he had never been sworn in, and was consequently an inefficient officer.

Shubenacadie River.—Mr. Veith's report on this river exhibits this fine stream in a most lamentable condition, the fishways at the various locks being utterly unserviceable, and the passage of salmon, bass and gaspereaux to Grand Lake completely stopped. The most complete obstructions to their ascent appear to be at Horne's Lock, where the fish have been netted and speared in prodigious quantities throughout the season. The gaspereaux were seen in the water in millions, and on the banks, dead and dying, in their attempts to proceed to the spawning ground. Several nets were seized by Mr. King, a very efficient agent of the Society, in the river during the season, brought into town, and are now in possession of the Society.

Sheet Harbor, East Branch.—The fishway placed in the river by Mr. Chisholm some four years since, according to the plan then required by the Government, not having been found effectual, Mr. Veith proceeded this year to inspect the same, and found that the new fish-ladder would not answer in this particular case, owing to the height of the dam, but recommended that advantage be taken of the natural conformation of the bank to make a practicable ascent for fish, in carrying out which scheme both the owners and the Society agree to join.

Little Salmon River, Preston.—The Society is happy to state that a great

improvement has taken place in Little Salmon River, owing to the mill-dam having been carried away. Numbers of fish were observed by one of the Council on the spawning grounds of this river.

Petpeswick River still remains totally obstructed, according to the warden's report.

Nine Mile River.—Salmon have ascended, this year, in unusual quantities, and have been seen, in the fall, endeavoring to force their way up to McKenzie's Brook, to Governor's Lake. Formerly they were enabled to ascend the brook, which is now totally obstructed by fallen timber. The Council beg to state that a small outlay would effect the necessary clearance.

In conclusion, your committee beg to state their conviction that, although the Society has not been idle, but little can be effected in carrying out a proper supervision of the Inland Fisheries, unless an independent and salaried officer be appointed by the Provincial Government, as in Canada.

The difficulties of prosecution, owing to the local partialities of both witnesses and magistrates, would then be overcome, whilst the judgment and advice of such an executive, with regard to the placing of efficient fish-ladders, under the various peculiarities of river banks and mill-dams, would be considered decisive in overcoming all obstructions.

No. 5.

Extract from Report of Fisheries Committee of House of Assembly, 1867.

The committee on the subject of the fisheries beg to report as follows:

They have had before them various petitions asking for further amendments in the law relative to the protection of the river fisheries.

The committee regret having to report that, notwithstanding the successive legislation of many years on this important subject, the wanton and unwise destruction of the various kinds of fish frequenting the rivers of this Province, has hitherto been but little or none checked.

The adoption of a particular kind of ladder in the year 1865, to afford a passage for salmon and other valuable fish over mill-dams, has not been attended with the desired and anticipated results. Owing to the peculiarities of the diffierent rivers and dams, it is quite evident that no one particular kind of fish-way will suit each. Feeling the great importance to the present, and particularly to the future interest of this province, of the successful protection of our river fisheries, upon which the continuance and prosperity of our deep sea fisheries largely depend, the committee have invited from "the Inland Fisheries and Game Protection Society," and from other sources whence useful information might likely be obtained, such suggestions as might lead to more successful legislation on this subject. They have decided that the want of success in the efforts hitherto made by the legislature to protect these nurseries of one of the first resources of the province, is not so much attributable to defective legislation as to failure on the part of those entrusted with carrying such legislation into effect to do their duty.

While many of the Courts of Sessions never fail to make due provision and regulations as required by law for the protection of the river fisheries, there are different counties in which little or no interest is taken in the subject, and consequently the law remains inoperative in those counties. In order, therefore,

to obviate the two main and perhaps only difficulties that have hitherto baffled the intention of the legislature to protect these fisheries, viz., in the first place the want of such means of affording practicable fish passages over the various mill-dams and other artificial obstructions, according to the peculiarities of such obstructions, without damage to private interests; and in the second place, the indifference and omission on the part of many of our Courts of Sessions to put the law into effective operation, the committee recommend the appointment of a chief inspector of the river fisheries of the province, whose duty it shall be to from time to time examine the different rivers frequented by fish, and see that the best means for the protection of such fish are adopted, and also to see that none of the Courts of Sessions omit to make the necessary provisions and regulations; and to offer them suggestions on the subject.

* * * * * * *

The subject of the obstruction of the passage of fish in the Shubenacadie River, by the canal locks thereon, which was on former occasions under the consideration of the committee, was again brought under their consideration by the petition of a number of the inhabitants of the County of Hants. The committee beg to recommend the passage of a law providing for the removal of these obstructions.

They have also considered the petition of William Krosser, of Kemptville, in the County of Yarmouth, asking to be reimbursed in the amount of certain expenses to which he had been subjected in connection with prosecutions in which he was engaged, as one of the wardens of river fisheries of that county; and recommend that, if the Court of Sessions of said County do not, at its next sitting, provide for such reimbursement, the Judge presiding at the next term of the Supreme Court for that county, after such sitting of the Court of Sessions, do amerce the county in such sum as said Judge may consider the said William Krosser entitled to.

The committee cannot close their report without expressing their admiration of the disinterested and useful efforts, involving much outlay of both time and money, on the part of the association in this Province called "The Inland Fisheries and Game Protection Society," in carrying out the laudable objects of the society: and from whom, as already stated, valuable suggestions have been received by this committee.

They beg also to acknowledge the valuable services rendered the fishing interests of this Province by Mr. T. F. Knight, in the publication, within the last year, of his two able pamphlets on the Fishes and Fisheries of Nova Scotia. The clear and comprehensive description furnished by Mr. Knight, of the nature, localities, and extent of our varied fisheries, must lead to the awakening, both at home and abroad, of a more accurate knowledge of, and active interest in this vast field of the natural resources of this Province.